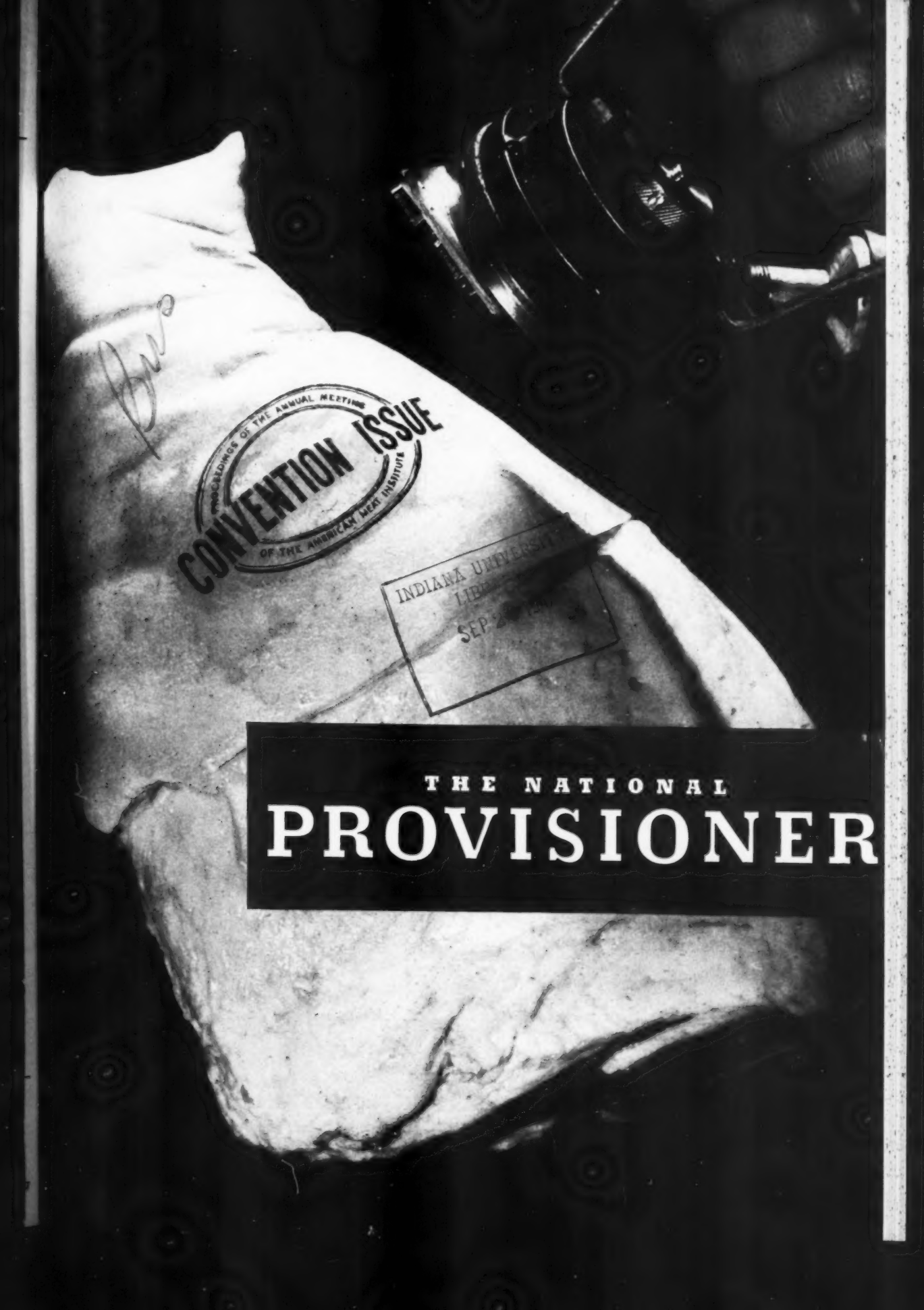
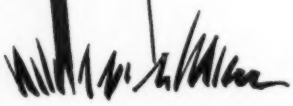

PROCEEDINGS OF THE ANNUAL MEETING
CONVENTION ISSUE
OF THE AMERICAN MEAT INSTITUTE
INDIANA UNIVERSITY
LIBRARY
SEP 2
THE NATIONAL
PROVISIONER

NO DANGER

BUFFALO MACHINES WORKING

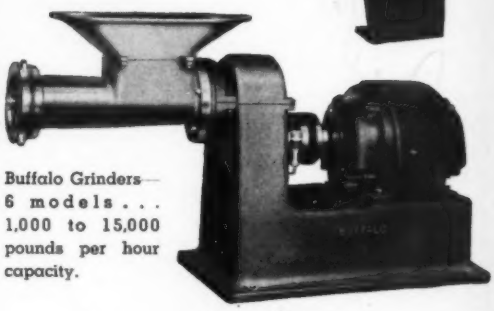


That's been a sign of the times in the sausage-making industry for nearly 80 years. BUFFALO QUALITY SAUSAGE-MAKING MACHINES produce a quality product with trouble-free, economical operation.

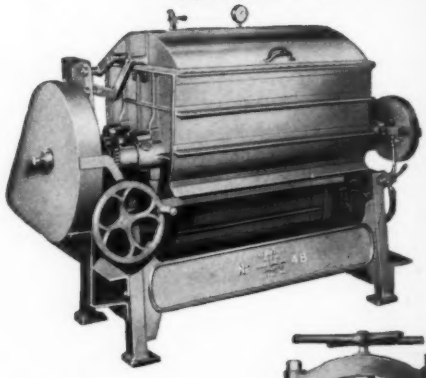
We hope you carefully inspected our line at the A.M.I. Convention. But whether or not we had the pleasure of greeting you, we'd like to send you complete details on the operating advantages and construction features of Buffalo machines. There's a size for every plant—large, medium or small.

Write today! An interesting catalog will be on your desk promptly.

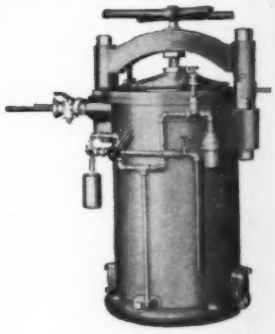
Buffalo Self-Emptying Silent Cutters—available in 200, 350, 600 and 800 pounds capacity.



Buffalo Grinders—6 models . . . 1,000 to 15,000 pounds per hour capacity.



Buffalo Vacuum Mixers—7 models . . . capacities 75 to 2,000 pounds.



Buffalo Stuffers . . . 7 models . . . 54 to 500 pounds capacity . . . equipped with Buffalo patented leak-proof pistons and safety devices.

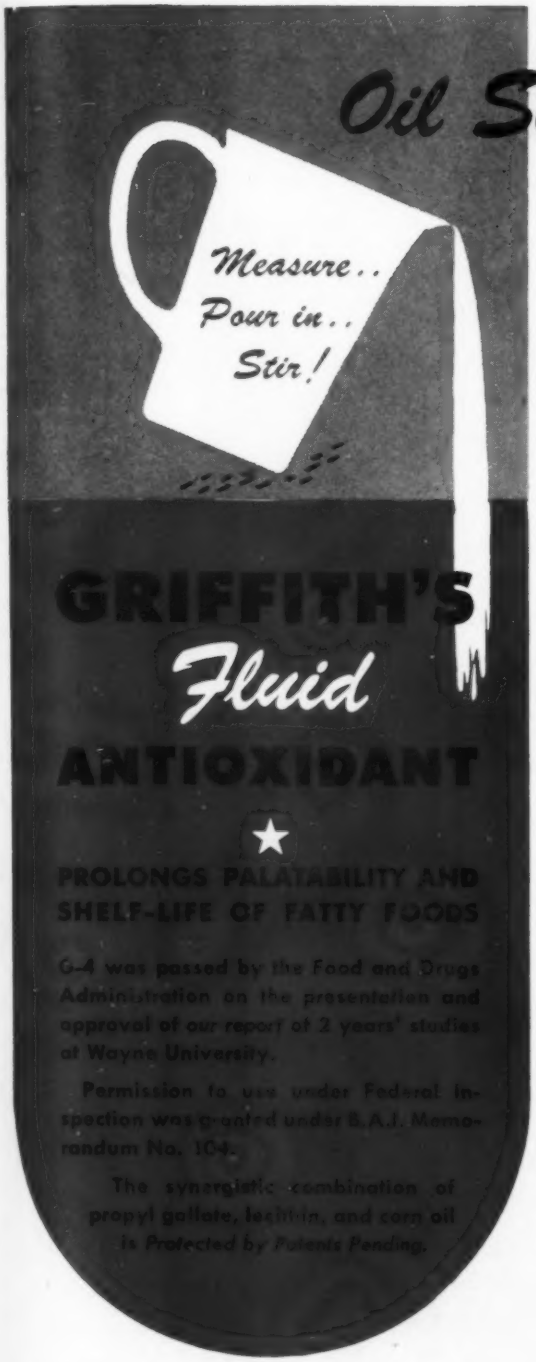
Buffalo

QUALITY SAUSAGE MAKING MACHINES

John E. Smith's Sons Co., 50 Broadway, Buffalo 3, N.Y.

Sales and Service Offices in Principal Cities

LARD FUTURES ARE BRIGHTER with SENSATIONAL, NEW G-4


Oil Soluble
Measure..
Pour in..
Stir!
GRIFFITH'S
Fluid
ANTIOXIDANT
PROLONGS PALATABILITY AND SHELF-LIFE OF FATTY FOODS
G-4 was passed by the Food and Drugs Administration on the presentation and approval of our report of 2 years' studies at Wayne University.
Permission to use under Federal inspection was granted under B.A.I. Memorandum No. 104.
The synergistic combination of propyl gallate, lecithin, and corn oil is Protected by Patents Pending.

STABILIZES YOUR LARD EASILY, ECONOMICALLY!

More and More Processors Are Using This Complete Antioxidant!

After filtering your lard, just *pour in* 2 oz.–4 oz. of G-4 per cwt . . . *and stir! That's all you do* to retard rancidity—to make a quality lard that keeps without refrigeration.

- No costly, laborious mixing with other substances.
- No interference with flavor of lard or fats.
- G-4 doesn't lower their melting points—doesn't affect their smoking points.
- Economical G-4 makes stabilization of lard and fatty goods profitable.
- Meets all requirements of B.A.I.

Order Now—Immediate Delivery

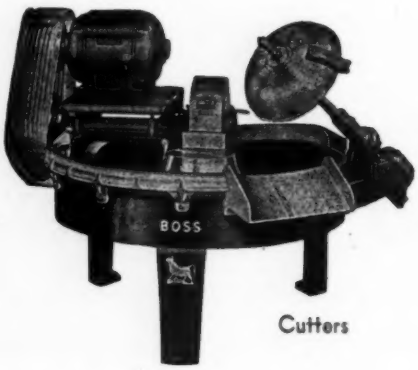
The GRIFFITH LABORATORIES

CHICAGO 9, 1415 W. 37th St. • NEWARK 5, 37 Empire St. • LOS ANGELES 11, 49th & Gifford Sts. • TORONTO 2, 115 George St.

THE NATIONAL PROVISIONER, Vol. 116, No. 11. Published weekly at 407 So. Dearborn St., Chicago 5, Ill., U.S.A. by The National Provisioner, Inc. Yearly subscriptions: U. S., $4.50; Canada, $6.50; Foreign countries, $6.50. Single copies 25 cents. Copyright 1947 by the National Provisioner, Inc. Trade Mark Registered in U. S. Patent Office. Entered as second-class matter October 8, 1919, at the post office at Chicago, Ill., under the act of March 3, 1879.

Conventions are wonderful

To our friends, old and new, who visited with us at our convention booth and at our hospitality center during the Chicago convention, we say "thank you" for your interest. We thoroughly enjoyed our conversations; and we benefited as much as you from the convention proceedings. Conventions are wonderful!

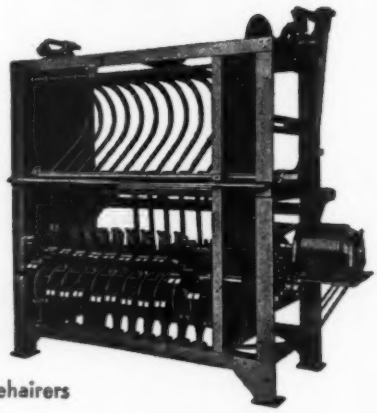


Cutters

Grinders

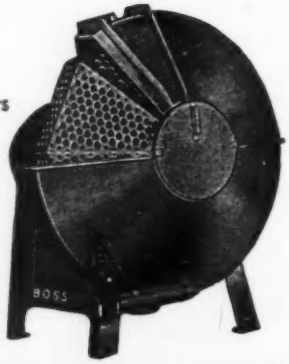
Stuffers

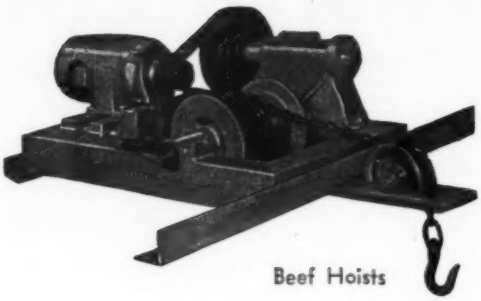
Hog Hoists



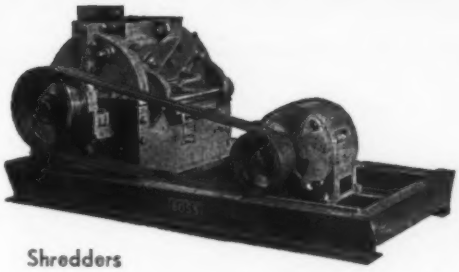
Dehairers

Scalders

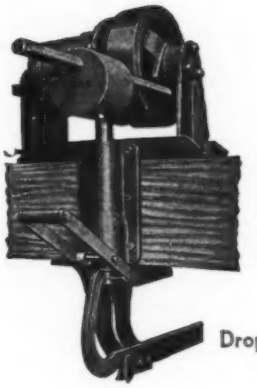




Beef Hoists



Shredders



Droppers

Landing Devices

Cookers
Knocking Pens
Crackling Presses
Gambreling Tables

BOSS
SINCE 1886

Mixers
Scalding Tubs
Hashers & Washers
Rollers & Shackles

We appreciate also your complimentary remarks about the stamina and efficiency of BOSS machines. For three generations we have supplied the meat industry exclusively; and every hour of this experience is utilized in our present designs. We think that every unit in our line of more than seven hundred items, is the best to be had. It's gratifying to have you say so too. We're purring like kittens.

THE *Cincinnati* BUTCHERS' SUPPLY COMPANY
CINCINNATI 16, OHIO

C-D SAUSAGE MANU

Guaranteed by **"THE OLD-TIMER"**

C. W. Dieckmann

More C-D Knives and Plates are now in use than any two other makes combined . . . a fact that attests to the superiority of C-D Products. "The Old Timer" knows the reasons that make his products a favorite. Made of special wear-resisting alloys, C-D Superior Plates and Knives wear longer, cut better, need less attention and actually cost less to use. There are styles, types and sizes to fit every purpose and every grinder. Leading packers secure exceptional results and low operating costs with C-D equipment . . . and so can you!

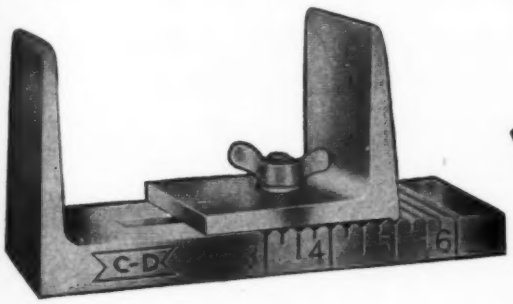
Before you buy. . . CHECK THESE ADVANTAGES:

- C-D Superior Plates are made of a special wear-resisting alloy guaranteed to outlast two plates of any other make.
- **They are available in all styles . . . angle hole, straight hole and tapered hole. REVERSIBLE, two plates for the price of one!**
- Equipped with patented spring lock bushing thus making loose bushings an impossibility.
- **The improved Triumph Plates have proved themselves the most economical plates in existence, cutting several million pounds of meat before sharpening is required.**
- All makes and sizes of solid knives and Superior Knives, Cut-More Knives, X.L. Knives, B&K Knives . . . all with changeable blades.

FACTURING EQUIPMENT

C-D SAUSAGE LINKING GAUGE

Increases the speed of hand linking, improves appearance of linked sausage, and slashes sausage linking costs! High measuring guides make it possible for operator to swing links with little effort. Links are uniform and cleanly divided. Easily adjustable to accommodate various lengths. 2 to 6—2 to 8—2 to 13 inch guides in stock. Other sizes made to order.



NEW! IMPROVED C-D CUT-MORE KNIFE

The most economical knife for large grinders. Superior to any other make so far produced. They are self-sharpening, always maintaining a razor sharp edge until the 3/8" cutting edge is worn down. They will not heat or smear the meat. They need no mechanic to change or adjust the blades, a small set-screw holds the blades securely in the holder.

FAMOUS C-D REVERSIBLE PLATE

Made of special wear-resisting alloy and designed to outlast two plates of any other make. Equipped with patented spring lock bushing. Guaranteed against cracking, breaking, pitting or chipping! Costs less to use.

"The Old Timer" Says: "I can show *you* as I have shown hundreds of others how simple it is to save money and reduce costs through the *proper* selection of your sausage making equipment. I can show you how to select the *right* knife or plate to fit your individual requirements. Always-dependable C-D Products are in daily use proving their superiority for meat packers and sausage manufacturers throughout the country. Every SPECIALTY Product renders long, economical and efficient service because of its original high quality. Before you buy another knife or plate check the many advantages of C-D Equipment . . . consult the 'Old Timer.'"

Beware of Using Cheap Grinder Plates and Knives

It's false economy to use an inferior grade of grinder plates or knives . . . they require frequent regrinding . . . and they wear out in an unbelievably short time. They actually prove *more expensive* to use! Avoid these pitfalls by choosing C-D TRIUMPH PLATES and C-D CUTMORE KNIVES. Their superiority has been proven in all the larger packing plants and in thousands of smaller plants throughout the United States and in several foreign countries. C-D TRIUMPH PLATES are guaranteed for FIVE YEARS against regrinding and resurfacing expense. They are *reversible* . . . actually two plates for the price of one. Now available in all sizes to fit all makes of grinders!

The SPECIALTY Manufacturer's Sales Company

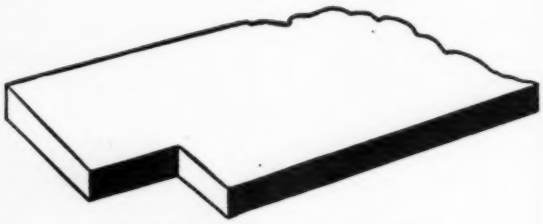
C-D

2021 GRACE ST. • CHICAGO 18, ILL.

UNION PACIFIC

TREASURE MAP OF INDUSTRY

Nebraska*



* *One of a series of advertisements based on industrial opportunities in the states served by the Union Pacific Railroad.*

- LARGE SOURCE OF FARM PRODUCTS
- LEADER IN DAIRY PRODUCTS
- MAJOR LIVESTOCK PACKING AND PROCESSING CENTER
- AMPLE WATER SUPPLY
- NATURAL GAS, COAL, OIL AND ELECTRIC POWER
- RICH MINERAL DEPOSITS
- DIVERSIFIED INDUSTRIAL ACTIVITY
- STRATEGIC DISTRIBUTION LOCATION
- EXCELLENT RAIL TRANSPORTATION
- SKILLED, FAIR-MINDED LABOR
- NO SALES OR INCOME TAX

Industries engaged in the packing or processing of farm products find Nebraska a rich source of raw materials. Corn, grains, sugar beets, potatoes and other vegetables are grown in abundance.

Omaha is a leading meat packing and poultry processing center. It frequently leads the nation in livestock receipts, is located in the world's largest butter producing area, and houses the nation's second largest industrial alcohol plant.

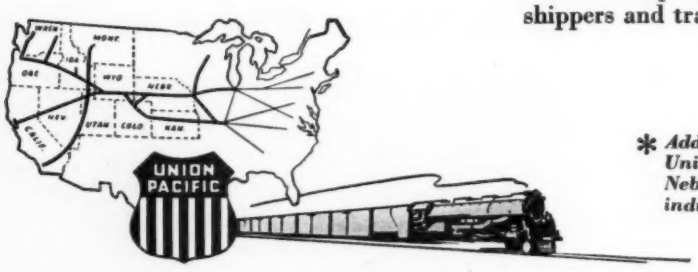
In addition to agricultural activity, there is diversified industrial manufacturing such as farm machinery, air conditioning equipment, fabricated steel, brick and tile.

Nebraska has large mineral deposits; gypsum, salt, potash, sand, gravel, stone, etc. Natural gas, petroleum and coal are readily available.

Of particular interest to industry is Nebraska's "pay-as-you-go" policy; no state sales, income or luxury taxes. It is a good place to work and live.

* * *

In Omaha are the headquarters of the Union Pacific Railroad which provides efficient, dependable transportation for shippers and travelers.

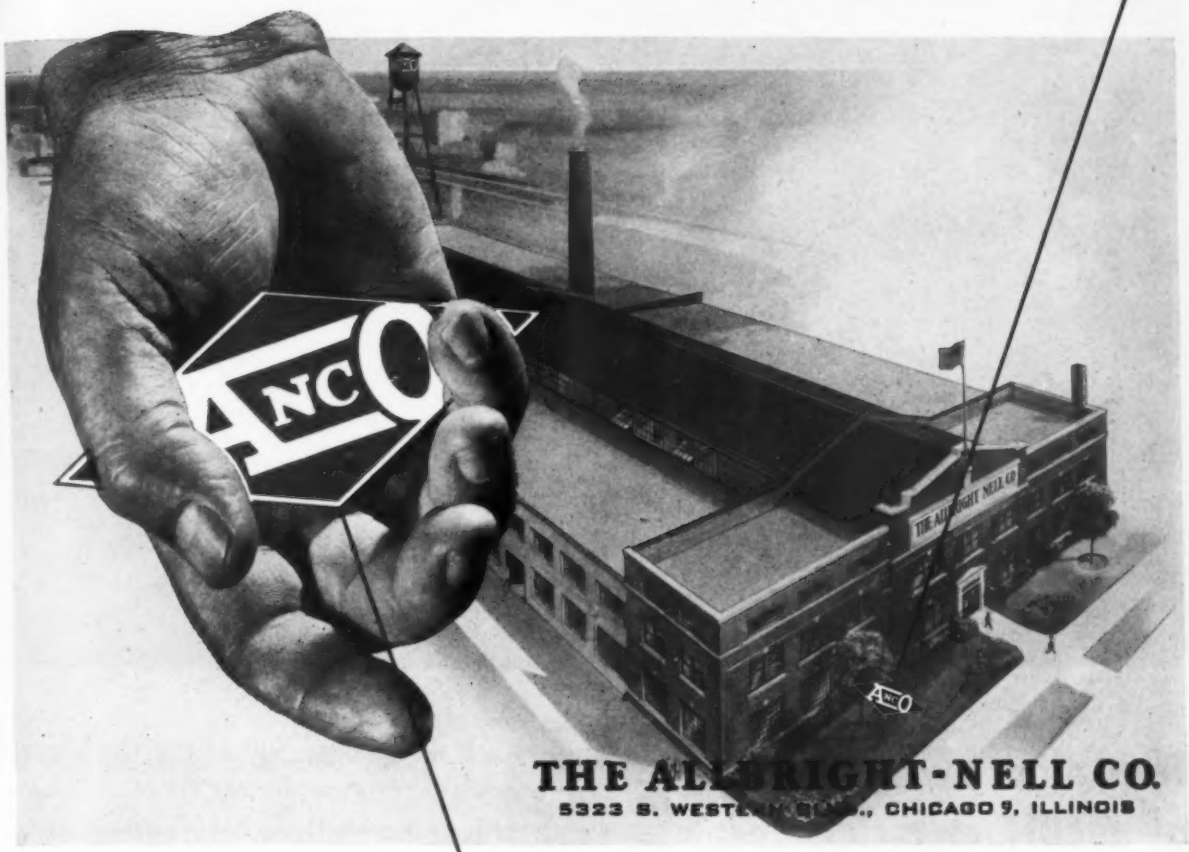


* *Address Industrial Department, Union Pacific Railroad, Omaha 2, Nebr., for information regarding industrial sites.*

UNION PACIFIC RAILROAD

THE STRATEGIC MIDDLE ROUTE

WHAT THIS WELL-KNOWN TRADEMARK SHOULD MEAN TO YOU



MODERN DESIGN, NEW AND EFFICIENT

SERVICE OF A LONG-ESTABLISHED ORGANIZATION

EXPERIENCE OF DESIGNING AND MANUFACTURING ENGINEERS

DEPENDABLE, LONG-LASTING EQUIPMENT

QUALITY OF WORKMANSHIP AND MATERIALS

REPLACEMENT PARTS THAT FIT

Fearn offers a complete line of quality materials for improving the saleability of sausage and specialties

•

FLAVOR BUILDERS

•

SEASONING MATERIALS

•

SPECIAL BINDERS

•

REGULAR AND COMPLETE CURES FOR CURED MEATS AND SAUSAGE

SPECIAL INGREDIENTS FOR EVERY MANUFACTURING AND PROCESSING NEED

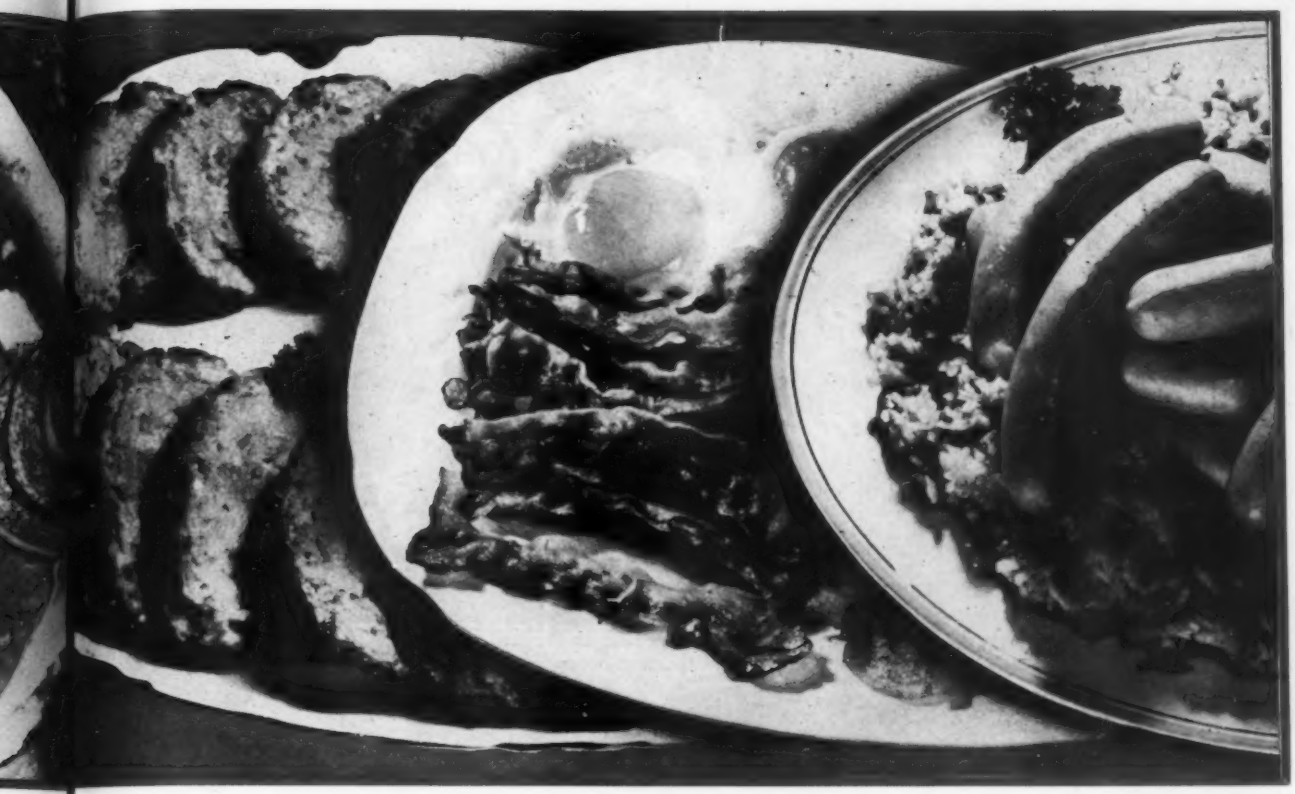
FEARN DEVELOPMENT SERVICE

provides a vital service for the Meat Industry

Whether your product problems concern themselves with development of new products, adding an extra flavor lift to present items, converting wartime canning lines to peacetime profits, or getting increased production from your present plant, Fearn can help you.

We maintain complete laboratory and test kitchen facilities, under skilled technicians and home economics experts, that are available for work on your problems. We would welcome your inquiries, and the opportunity of serving you.

fearn's *flavor builders*



appetizing appearance and fine flavor are essential for sausage, loaves and specialty profits

Cured meats, canned meats, sausage and specialty products must each have their own distinctive quality and flavor appeal. For this purpose Fearn makes a complete line of fine food specialties for the meat industry. There are Fearn products for enriching flavor, for enhancing appearance, for better spicing, for finer texture, for increased yields and finer quality. You can use any Fearn product with assurance of finer-than-ordinary results, plus dollars-and-cents advantages that will more than pay the slight cost of the Fearn materials you use. Get the details.

are business builders

fearn laboratories, inc.
FRANKLIN PARK, ILLINOIS

New GMCs

BETTER LOOKING! BETTER RIDING! BETTER BUILT!

THE LAST WORD IN *CAB COMFORT*

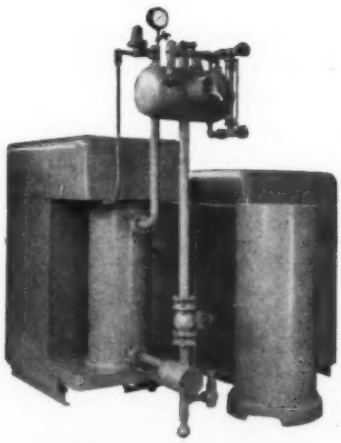
There's comfort galore in the cab of a new light or medium duty GMC! It's all-steel . . . wider and longer . . . completely insulated and soundproofed. Its adjustable seat has 73 individually wrapped springs . . . heavy upholstery and padding. Its windshield is higher and wider . . . visibility greater all around. Its unique ventilation system provides circulating fresh air . . . heat if desired. Dome light, ash tray and sealed-on handles are three of its many finer appointments.

Out front, there's added protection with rugged bumper bar grille, frame-mounted and angle braced. Under the hood, there's war-proved, improved power with engines of "Army Workhorse" design. Under the load there's solid strength with heavier axles and frame. And overall, there's a complete range of chassis and body types with a smartly styled model for your job.

GMC TRUCK & COACH DIVISION • GENERAL MOTORS CORPORATION

THE TRUCK OF VALUE GMC TRUCKS GASOLINE • DIESEL

"Sure, I use Lard"



THAT'S what the lady in the kitchen said when the writer of this ad asked her if she used lard or some other shortening.

"Lard is good," she added. "Too bad this isn't obvious when you look at some kinds of lard."

To assure visibly good lard texture, color, and consistency, sales minded packers handle their lard chilling and plasticizing operations on a continuous, closed, controlled basis with VOTATOR apparatus. It makes for the uniformly smooth, white, creamy lard people ask for by brand name. It reduces lard processing cost.

Proof is in the widely known, fast-selling brands of lard which are being processed with VOTATOR apparatus. Write for case history data.

Votator

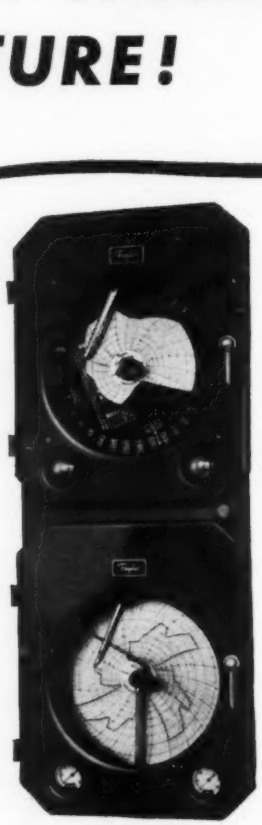
LARD PROCESSING APPARATUS

THE GIRDLER CORPORATION, VOTATOR DIVISION, LOUISVILLE 1, KY.

150 Broadway, New York City 7 • 2612 Russ Bldg., San Francisco 4 • 617 Johnston Bldg., Charlotte 2, N. C.

VOTATOR is a trade mark (Reg. U. S. Pat. Off.) applying only to products of The Girdler Corporation.

HERE'S WHY I DON'T WORRY ABOUT MY FUTURE!



ANY intelligent, well-fed hog would be proud as punch to leave his future in the hands of this Taylor Fulscope Time-Schedule Controller. It doesn't provide a heaven for hogs, but it *does* ensure a heavenly taste for hams when they're cured in a properly designed smokehouse.

If you start with a modern air-conditioned smokehouse this popular Taylor Controller eliminates almost all possibility of human error and reproduces your ideal smoking schedule automatically every time. About all the operator has to do in between starting and stopping the process is to glance at the chart occasionally to see that everything's OK.

Results? Greatly increased production and more uniform products than ever before! This precise smokehouse control can help you guard against flavorless hams or tough cases on sausages because of too low temperatures . . . green centers because of wrong curing temperatures . . . separation of meat from bone or casing because of too high temperature.

If you want better quality cervelat, hams, tongue or other smoked meats, ask your Taylor Field Engineer. When you are buying a new smokehouse be sure to specify "Taylor Equipped As Usual." Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

Taylor Instruments

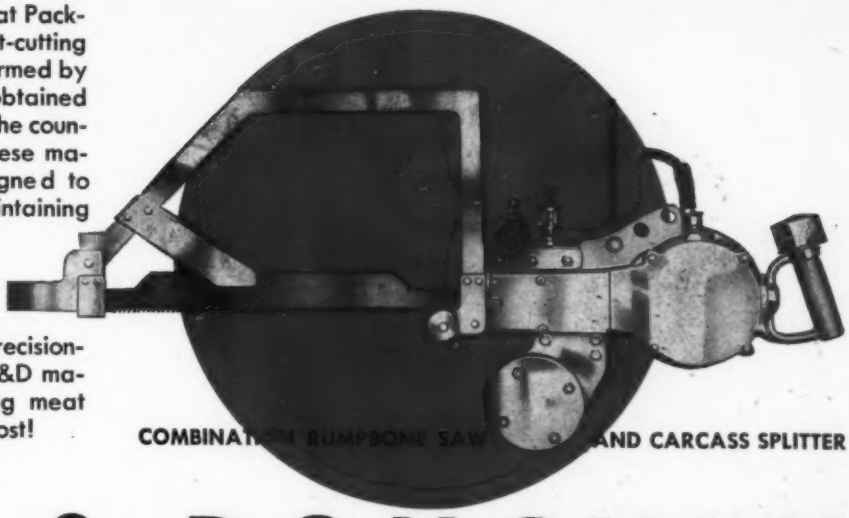
MEAN

ACCURACY FIRST

IN HOME AND INDUSTRY

Our pledge to supply the Meat Packing Industry with genuine cost-cutting machines is continuously reaffirmed by the gratifying results being obtained daily by packers throughout the country using B&D equipment. These machines were specifically designed to increase yields while maintaining traditional high-quality standards . . . these *proved-on-the-job* machines are manufactured exclusively by BEST & DONOVAN, originators of precision-built saws. More than 3000 B&D machines now in use—processing meat faster, better and at lower cost!

Ask your neighbor!

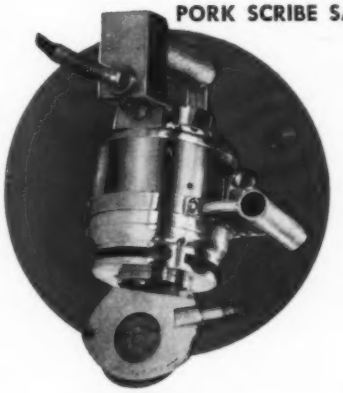


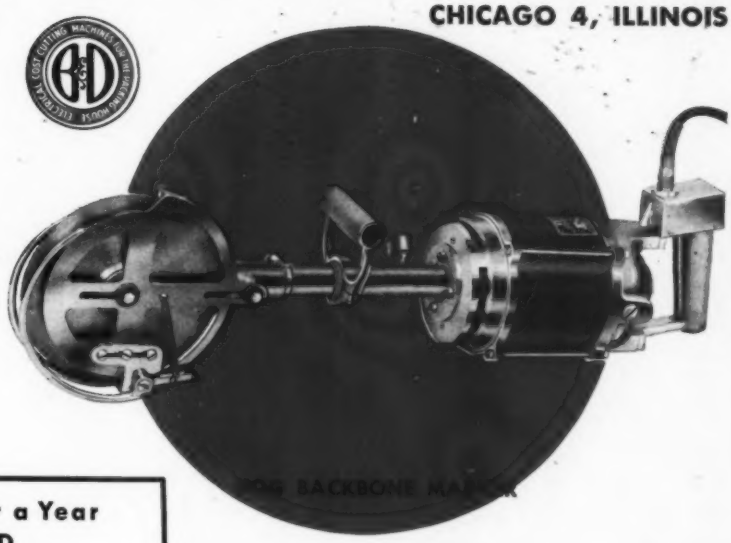
COMBINATION RUMPBONE SAW AND CARCASS SPLITTER

BEST & DONOVAN

332 SOUTH MICHIGAN AVENUE **CHICAGO 4, ILLINOIS**

PORK SCRIBE SAW



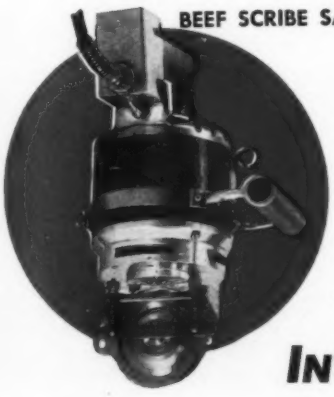


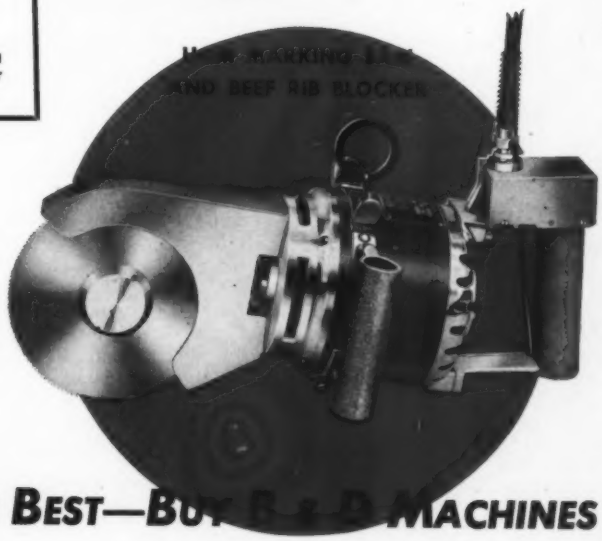
HOG BACKBONE MA[illegible]

Job-Proven for Over a Year
The New B & D
DEHORNING MACHINE

is now announced and ready for use by the meat packing industry. We suggest that you place your order now for near-future delivery.

BEEF SCRIBE SAW

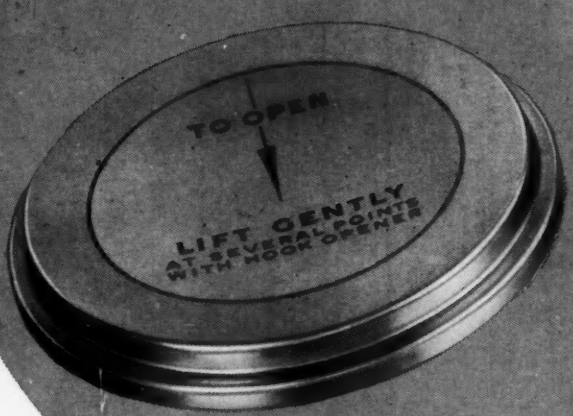




[illegible] MARKING [illegible]
AND BEEF RIB BLOCKER

INVEST IN THE BEST—BUY B & D MACHINES

The most dependable, hermetic or vacuum seal known . . . with the ANCHOR D Cap



★ For all glass-packed foods

★ Side seal

★ Tamper-proof

★ Hermetic or vacuum seal

★ Nested for cleanliness

★ Nested for fast handling

THAT'S a broad statement, we know. But it's the truth—that the Anchor D Cap provides the most dependable tamper-proof seal known for all kinds of food products packed in tumblers, jars or bottles.

It's a mechanical seal, made by *compressing* a resilient gasket firmly into contact with the container finish at a point well below its top edge. This effectively overcomes top edge imperfections that are common to all glass containers.

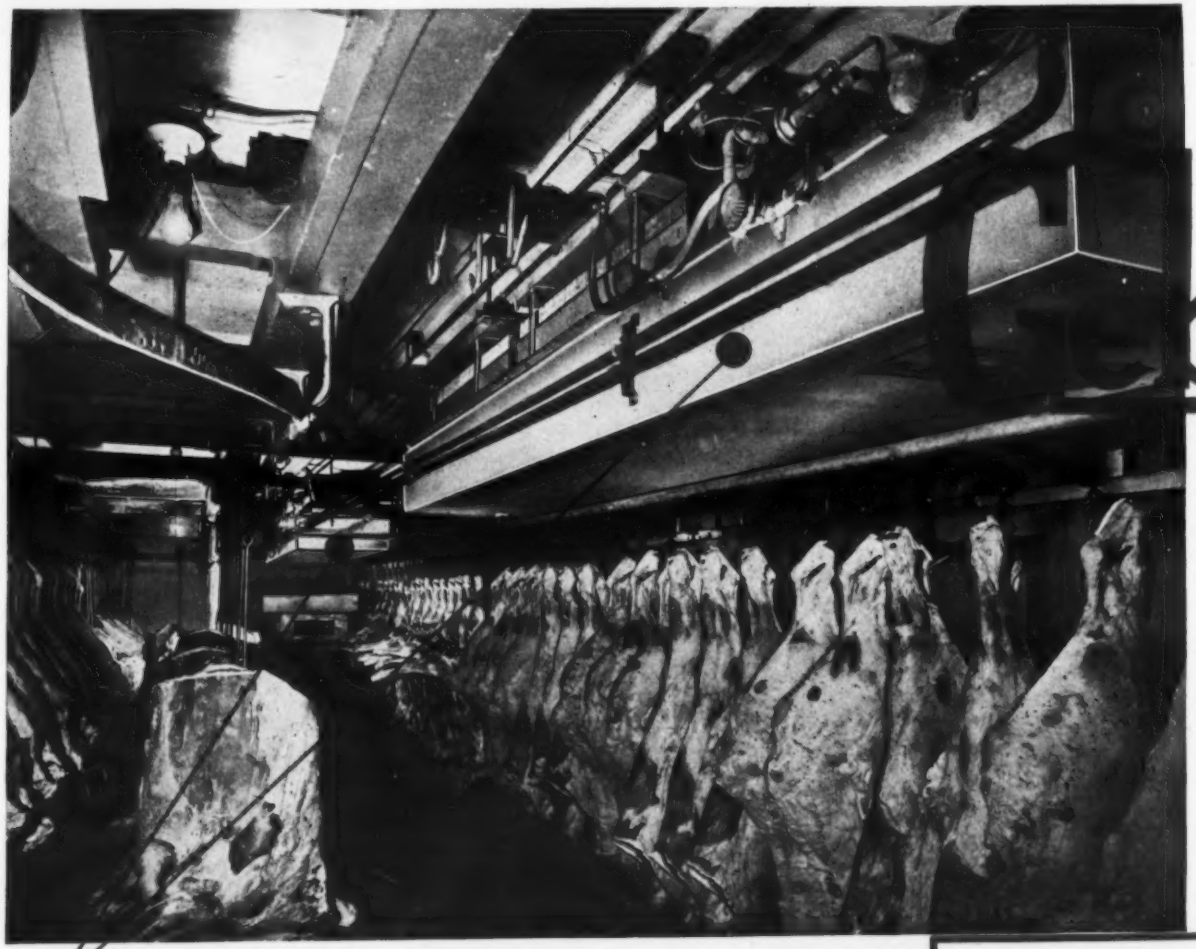
How do you pack your products? Vacuum or hermetic sealing—sterilizing—processing—hot or cold packing? The Anchor D Cap is ideal for all these methods—gives a positive seal—full product protection against air, moisture and bacterial action.

One final advantage—Anchor D Caps come to you nested. That means they speed handling—stay clean until applied—save storage space—provide added protection from shipping and handling hazards.

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO



The GEBHARDTS refrigeration system installed between the rails in the beef and veal sales cooler above maintains 32° temperature and 88% average relative humidity.

KEEP NATURE'S COLOR ON BEEF AND VEAL with

Gebhardts

(CONTROLLED REFRIGERATION SYSTEMS)

You protect the bloom on beef, veal and lamb when you use GEBHARDT refrigeration. The ionizing effect produced by GEBHARDTS units keeps that bright color and fresh appearance for a longer period of time.

NOW—IMMEDIATE DELIVERY! Send today for the new Gebhardt catalog!

"GEBHARDTS" are fabricated of Stainless Steel (at no extra cost) to insure complete sanitation, cleanliness and purity.

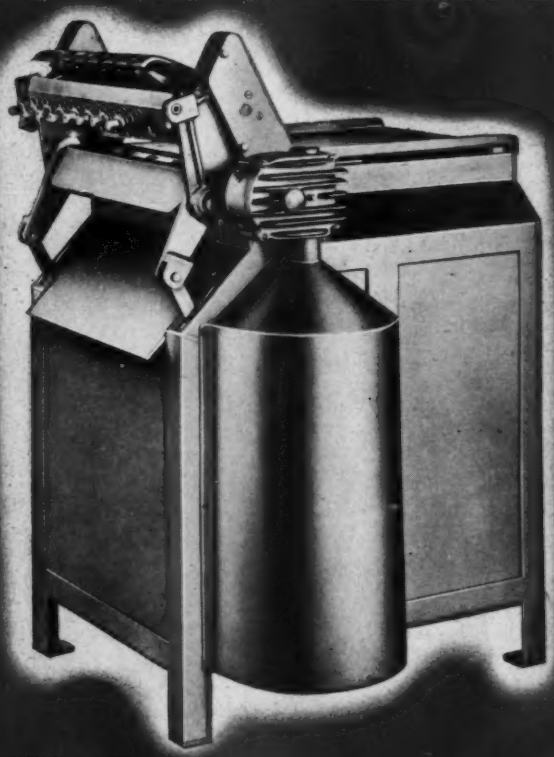
Gebhardt COLD AIR CIRCULATORS PATENTED — CONTROLLED TEMPERATURE — CONTROLLED CIRCULATION — CONTROLLED HUMIDITY — AIR PURIFICATION

ADVANCED ENGINEERING CORPORATION

YOU WIN THIS SKIN GAME

with the new high speed

TOWNSEND BACON SKINNER



Takes bellies and cured bacon "as is", eliminating special trim. Skins cured bacon fast and carefully, cuts clean and close without damaging a single piece of valuable bacon.

Simple in design, easy to operate, requires only 30 in. by 36 in. floor space. No special skill necessary to put the Townsend through its productive paces.

Few moving parts to maintain and keep clean. If you want to boost your bacon output and lower costs at the same time, the new high speed, automatic Townsend Bacon Skinner is your machine. Write for more information today.

DOWN GO PORK SKINNING - FLESHING COSTS

skins and fleshes any pork cut
Saves up to 52% In Labor Costs

TOWNSEND SKINNER-FLESHER

Handles all pork cuts — hams, picnics, shoulders, fat backs, boot jacks, feet — regardless of size or thickness. Automatic, foolproof, easy to operate.

One Townsend, handling 350 to 400 picnics an hour, can keep 4 or more boners busy. Packers report an increase in yield of 4% on many pork cuts.

Interested? Write today and learn how the Townsend can make money for you.

Townsend

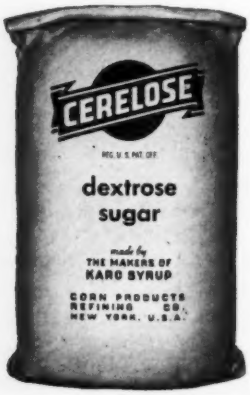
ENGINEERING COMPANY

315 E. SECOND ST. • DES MOINES 9, IOWA

new ham skinner accessory

Easily attached to any Townsend Skinner and Flesher to speed up ham skinning. Does a clean skinning job — leaves just the right amount of collar. Write for details.

"That's Harper--production--showed R. J. how much Cerelose improved our whole line."



FLAVOR
COLOR
QUALITY
STEPS UP

CORN PRODUCTS SALES COMPANY
17 Battery Place • New York 4, N. Y.

7 OUT OF 10

Seven of the ten largest lard producers in the United States protect their lard with N.D.G.A. Antioxidant.

WHY?

More than three years of actual use-experience in lard has proved the effectiveness and dependability of N.D.G.A. Antioxidant under varying conditions.

Within the limits of concentrations permitted by the M.I.D., no other antioxidant provides as great a degree of protection against rancidity.

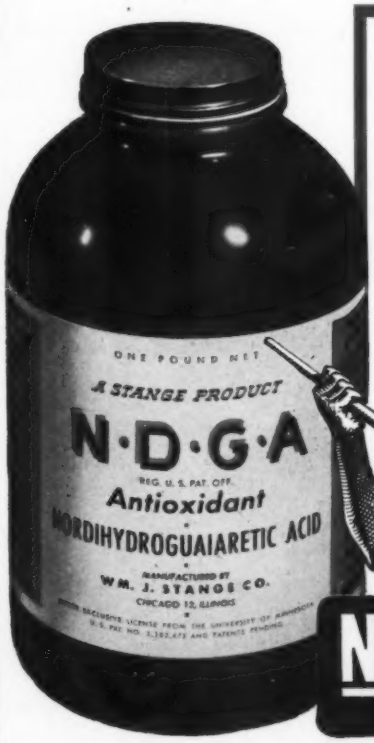
N.D.G.A. Antioxidant is the only really effective antioxidant that occurs as such in nature, and that can be isolated and used in pure crystalline form, free from impurities.

N.D.G.A. Antioxidant cannot discolor lard

N.D.G.A. Antioxidant cannot impart an off taste to lard

N.D.G.A. Antioxidant cannot impart an off odor to lard

For maximum protection in large scale lard production under technical supervision, it is recommended that N.D.G.A. Antioxidant, in pure crystalline form, be used in combination with Citric Acid as the synergist.



NEW — NOW AVAILABLE — "N.D.G.A. PREMIX"

For lard production where technical supervision is not constantly available, we recommend the use of N.D.G.A. Premix. This is a new combination in dry, granular form consisting of a carrier of Hydrogenated Vegetable Oil, Nordihydroguaiaretic Acid, and Citric Acid in correct proportion. Usage is simplified to merely adding to the hot lard at, or above, 140°.

Write for sample and complete instructions.

NorDi·GuArded
REG. U.S. PAT. OFF.

Manufactured by the
WM. J. STANGE CO.

Sole Distributors
NORDIGARD CORP.
CHICAGO 12, ILLINOIS

Year after year— Meat Packers

SHIP IN WIREBOUNDS

FOR

GREATER PROTECTION

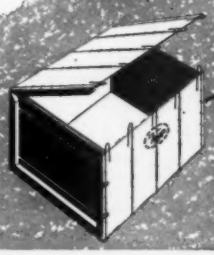
LIGHTER WEIGHT

EASIER ASSEMBLY

FASTER REFRIGERATION

LOWER COST

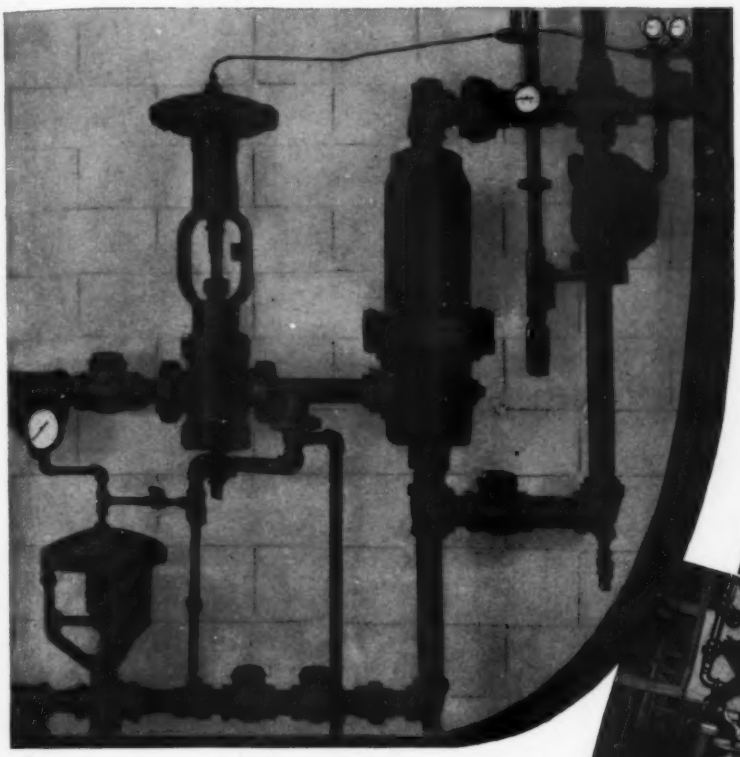
Yes, for more than forty years Wirebound Boxes have served Meat Packers by providing the safest, most economical means of shipping meat products of all kinds. Because Wirebounds can be ready to pack in less than a minute, can be closed in a matter of seconds, can withstand extreme moisture and temperature conditions and take rough handling in all phases of warehousing and shipping —millions are used annually by the Meat Packing Industry.



WIREBOUND BOX MANUFACTURERS ASSOCIATION
ROOM 1830, BORLAND BUILDING, CHICAGO 3, ILLINOIS

Wirebound
BOXES & CRATES

CROSS YOUR T's For *Safe* Hot Water Efficiency!



Only Pick Instant Water Heaters Give You

Hot Water Instantaneously from 10 to 200 Gallons Per Min.

Absolute Temperature Control from 40° to 180° F.

Complete Safety as an Integral Part of the Heater Design . . .

A PICK instant water heater will cross the "T's" right out of your picture!

PICK's "pressurizer piston"• assures you of a constant flow of hot water at the *exact* temperature required in each department. No fussing with valves for hand mixing . . . no bulky storage tanks. Simply set the thermostat, open the water valve, *and you have hot water!* There's no danger of flashback, since the steam valve shuts off *automatically* if water supply pressure fails.

Heaters are pre-engineered and factory assembled—in seven sizes with maximum capacities ranging from 10 to 200 gallons of hot water per minute. PICK engineers will help you to select the particular model that will solve your hot water problems most efficiently.

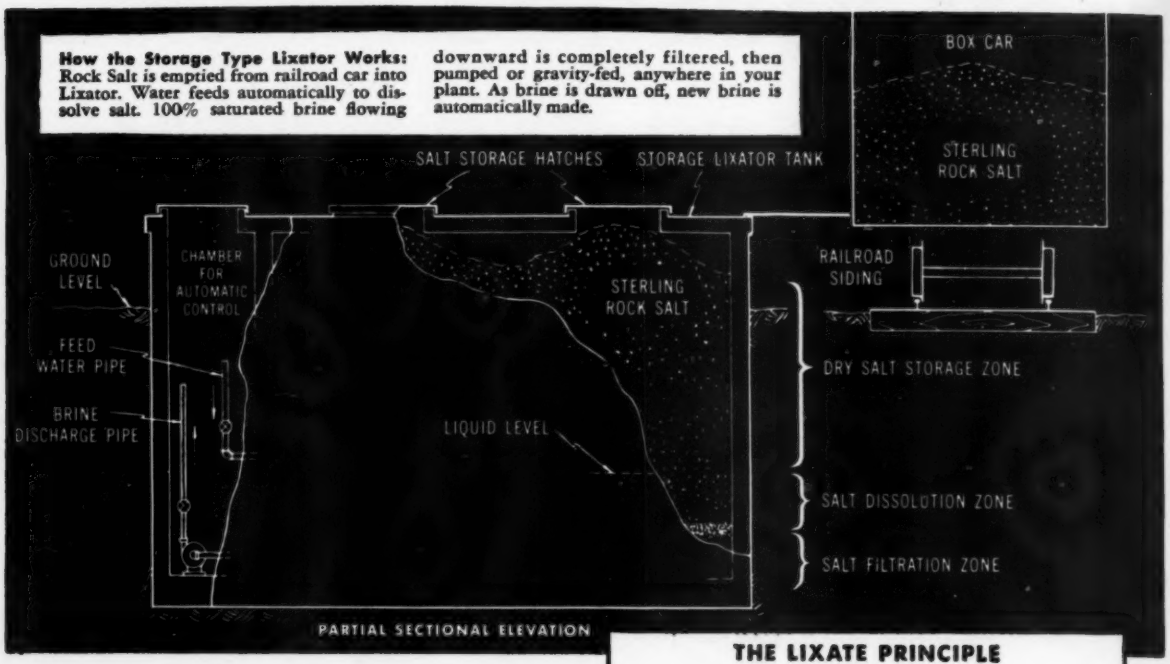
• *A patented feature, exclusive with PICK*

FOR FURTHER DETAILS, WRITE DEPT. 11

Made by **PICK MANUFACTURING CO.**
WEST BEND, WISCONSIN, U. S. A.

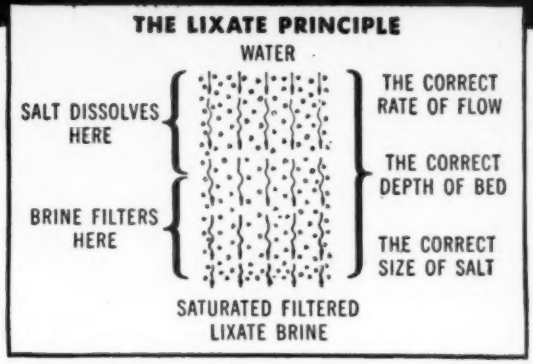
Pick HOT WATER HEATERS

A Storage Type Lixate Rock Salt Dissolver Suitable for Meat Packing Plant


How the Storage Type Lixator Works: Rock Salt is emptied from railroad car into Lixator. Water feeds automatically to dissolve salt. 100% saturated brine flowing downward is completely filtered, then pumped or gravity-fed, anywhere in your plant. As brine is drawn off, new brine is automatically made.
BOX CAR
STERLING ROCK SALT
SALT STORAGE HATCHES
STORAGE LIXATOR TANK
GROUND LEVEL
CHAMBER FOR AUTOMATIC CONTROL
FEED WATER PIPE
BRINE DISCHARGE PIPE
STERLING ROCK SALT
LIQUID LEVEL
RAILROAD SIDING
DRY SALT STORAGE ZONE
SALT DISSOLUTION ZONE
SALT FILTRATION ZONE
PARTIAL SECTIONAL ELEVATION

"Thanks to our Storage Type Lixators We now have Plenty of CLEAN, ECONOMICAL, SATURATED BRINE!"

Says J. A. JULIAN, Gen'l Plant Engr., Oscar Mayer & Co.



WELL-KNOWN MEAT PACKERS requiring a large volume of crystal-clear brine for pickle formulas, refrigeration, and other important uses are reaping substantial benefits from their Storage Type Lixate Rock Salt Dissolvers.

A typical report comes from Oscar Mayer & Company, Inc. in whose plants Storage Type Lixators provide brine which meets every requirement of quality and quantity, and help this leading packer to achieve highest standards in its products.

This exclusive development of International Salt Company cuts costs too by centralizing your salt storage and brine production operations at one convenient location. This virtually eliminates the costs of handling salt within the plant since 100% saturated crystal-clear brine is made and filtered automatically... then distributed by pipes to every point of use.

Through its engineering staff International Salt Company, Inc. offers counsel on efficient and economical handling of salt—and brine—both in standard Lixators and in designing and building the Storage Type Lixator to fully meet specific requirements for brine in great volume. A representative thoroughly familiar with the uses of brine in meat packing plants will gladly give you complete information. Inquiries are cordially invited.

For more information about the Storage Type Lixator, simply fill in and mail this coupon to:

INTERNATIONAL SALT COMPANY, INC.
Dept. NP-9, Scranton, Pa.

*Name*_____

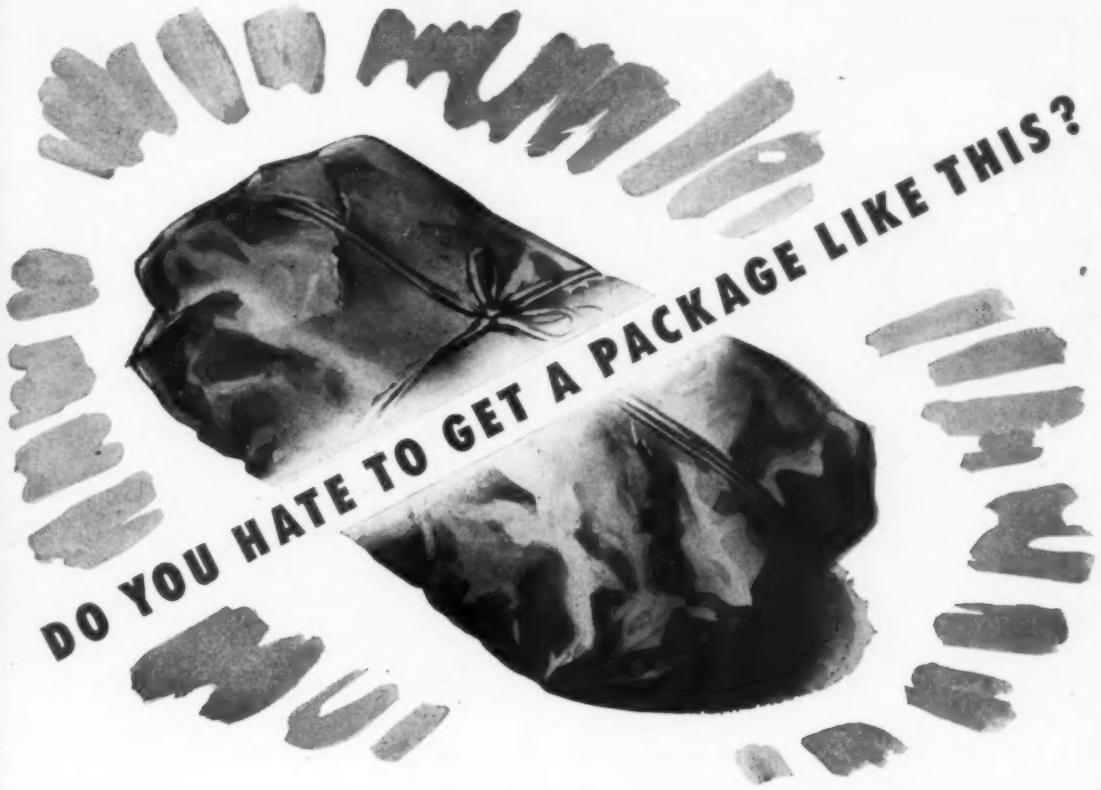
*Firm*_____

*Street*_____

*City*_____ *State*_____

The LIXATE *Process*
Reg. U. S. Pat. Off.
for making brine

INTERNATIONAL SALT COMPANY, INC.
Scranton, Pa.



...so does your customer!

If you're like most people you resent having anything delivered in a torn, disheveled package.

Your customer is no different. He likes to get his supplies and purchases from you neatly wrapped—well protected. That is especially essential to packinghouse products.

The result of nearly a half century of experimenting, HPS PACKING-HOUSE PAPERS are noted for their tough, durable quality and ability to withstand scuffs and tears. Furthermore, they do not pulp or disintegrate.

For protecting freshness, flavor and bloom—for preventing weight loss, HPS wrappings are unexcelled.

For special wrapping needs consult HPS RESEARCH SERVICE. Visit our laboratory or ask a representative to call.

HPS

A Sure Sign of Good Paper

H. P. SMITH PAPER CO.

5001 WEST SIXTY-SIXTH STREET

CHICAGO 38

PAINT RIGHT THROUGH WET FILM WITH DAMP-TEX

LIQUID PORCELAIN-LIKE ENAMEL

CHECK the following performance facts about this amazing enamel... then write us for complete details of our no-risk trial offer. **(1)** One coat of Damp-Tex covers. **(2)** Forces out moisture and dries overnight into porcelain-like waterproof film despite presence of moisture. **(3)** Sticks to wet or dry wood, metal, concrete, plaster and masonry. **(4)** Kills Rust, Rot, Dinge, Bacteria and Fungus*. **(5)** One gallon covers approximately 350 sq. ft. of porous surface, 450 sq. ft. of non-porous surface. **(6)** Will not check, peel, sag, soften or fade. No flavor-tainting odor. **(7)** Dries free of brush marks, may also be sprayed. Comes in colors and white.

*With Pre-Treatment.

FREE! *On the recommendation of the 4000 plants that use Damp-Tex, send for free descriptive folder K, also details of our offer to ship you a trial order of Damp-Tex absolutely at our risk.*

STEAM TEST
Damp-Tex is unaffected by live steam common to many plants.

WASHING TEST
Constant moisture and repeated washings will not soften or in any way harm Damp-Tex.

FUNGUS TEST
Pre-Treated Damp-Tex will resist fungus, mold or mildew on the surface to be painted.

MOISTURE TEST
Water soaked bricks painted with Damp-Tex and dried in the sun prove the film will not blister or break

CAUSTIC SOLUTION TEST
Two to three percent caustic washing salutions are not injurious to Damp-Tex Enamel.

DAMP-TEX

THE WET SURFACE ENAMEL

ACID TEST
Damp-Tex is unaffected by lactic and other common food acids.

STEELCOTE MFG. CO. GRATIOT at THERESA **ST. LOUIS, MO.**

NOW YOU CAN BUY A

Power-Driven Carcass Splitter FOR ONLY $468.50

and get immediate delivery on promptly placed orders

- A HUSKY, POWERFUL SAW BUILT FOR LARGE PRODUCTION
- WILL SAVE YOU MONEY IN FIRST COST AND OPERATING COST
- AN EBSCO QUALITY PRODUCT

The EBSCO Carcass Splitting Saw is completely new and different. It offers unusual advantages that insure fine results. It will speed production and cut costs for every beef slaughterer.

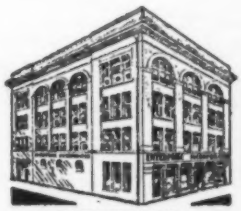
The EBSCO Carcass Splitter has ample capacity to split any size carcass, with the added advantages that it cuts faster and with less heat, carrying bone dust away from the carcass, and hence can be used even on choice carcasses. More teeth on the special steel blade means faster cutting with less resharpening. Longer blade length means better blade cooling and less burning of bone. High efficiency means lower operating cost!

The entire saw is sturdily and soundly built for minimum maintenance. Blade revolves on wheels with sealed bearings. The entire unit is easy to lubricate, easy to clean and easy to use on any floor with any rail system. Equipped with ¾ h.p. 110 v. or 220 v. motor with trigger switch operation the saw weighs only 145 lbs. and is 69" long. Entire construction is the best that modern materials and engineering skill can produce.

And best of all, the cost is LOW! Priced at only $468.50, complete with counterweight, overhead track and six blades, the EBSCO Carcass Splitting Saw can be used with profit in YOUR plant. Send your order or inquiry now to insure prompt delivery!

Enterprise Incorporated

612-614 ELM STREET • DALLAS 2, TEXAS


ENTERPRISE BLDG.

"EBSCO" PRODUCTS SINCE 1905

Manufacturers and Distributors of

MEAT PACKERS' and SAUSAGE FACTORY EQUIPMENT and SUPPLIES

3 PLACES YOU CUT COSTS

WHEN MACHINE CLEANING HAM AND OTHER COOKED MEAT MOLDS

with Fullergript brushes . . .

Whether you use a single brush or a triple-brush commercial machine, you will find Fullergript cutting costs in 3 ways. Fullergript employs a durable aluminum core that is refillable. This is how you save:

1. Fewer Spare Parts

With Fullergript there is no need to send out the brush cores for refilling. There is no necessity of stocking spare cores. Your investment in cores is cut in half. With Fullergript you merely stock spare brush refills—which your maintenance man or stores department can install quickly.

2. Slowdowns Eliminated

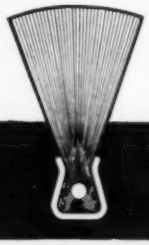
Because you no longer send the cores outside your plant, your production cannot be held up by refilling delays or poor deliveries.

3. Brush Life Increased 5 to 1

Fullergript Metalback, loop-anchored brush coils give this longer life because they contain the brush materials found most durable for this job, and because these materials are positioned with unparalleled density.

When large packers standardize on Fullergript Ham Mold Brushes, you are given a tip off on manufacturing economies that it will pay you to investigate. Simply write and ask our representative to give you full details.

FULLERGRIPT DIVISION
The **FULLER BRUSH** *Co.*
DEPT. 389 • HARTFORD 2, CONN.



FULLER GRIPT

a Smart move

WEAR·EVER *Aluminum*

IS STRONG • SANITARY • LIGHT

WEAR-EVER 5 LB. MEAT LOAF PAN

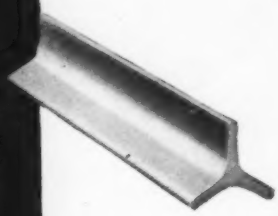
This rustless pan is sanitary. No bead, no seams, no crevices. Has special heat absorbing finish for fast, even baking.

WEAR-EVER TUBS

Handles on this seamless tub have special reinforcing weld for extra strength. Both bead and wearing ring on base are welded shut. 100 lb. capacity.

WEAR-EVER SMOKESTICKS

Strong and durable; can't warp, splinter or rust. Designed so that only a small section of metal comes in contact with your product. Available in any length your racks require.



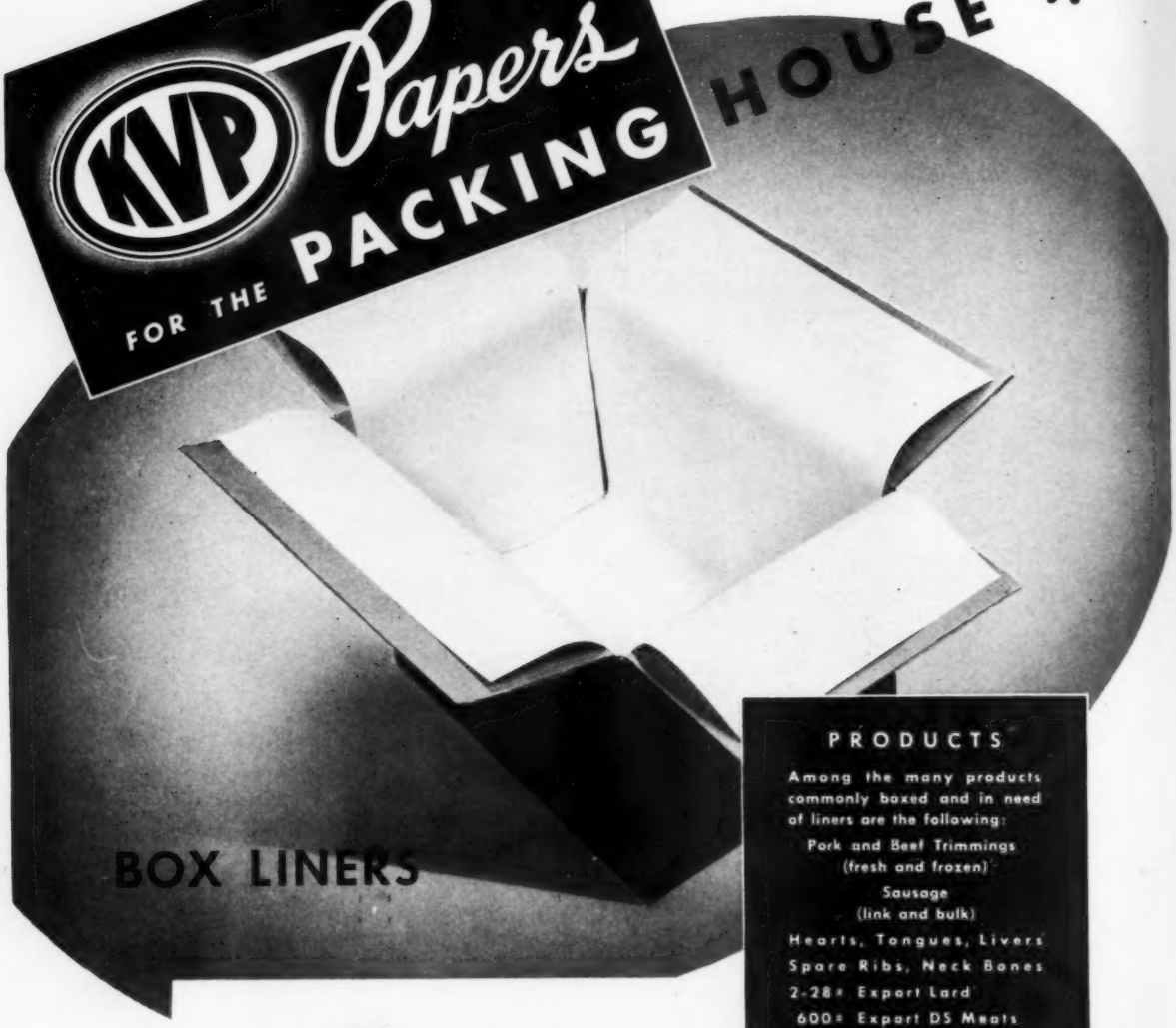
WRITE: The Aluminum Cooking Utensil Company
409 Wear-Ever Building, New Kensington, Pennsylvania

WEAR-EVER ALUMINUM TRADE MARK REG. U.S. PAT. OFF.

NOW! MORE WEAR THAN EVER IN

WEAR·EVER *Aluminum*

KVP Papers FOR THE PACKING HOUSE *



THE KVP PAPERS

Five types of KVP papers are in wide use for these liners. They include:

GENUINE VEGETABLE PARCHMENT
WAXED PARCHMENT
SPECIAL LARD LINER PARCHMENT
LARD LINER GREASEPROOF
D-O-K WAXED
All in varied weights, plain and printed.

PRODUCTS

Among the many products commonly boxed and in need of liners are the following:

Pork and Beef Trimmings (fresh and frozen)
Sausage (link and bulk)
Hearts, Tongues, Livers
Spare Ribs, Neck Bones
2-28# Export Lard
600# Export DS Meats
600# Export SP Meats

TYPES OF LINERS

Three types of liners are commonly used:

1. Straight
2. Candy box or Maltese Cross
3. Tight corner die cut

* NO. 1 OF A SERIES

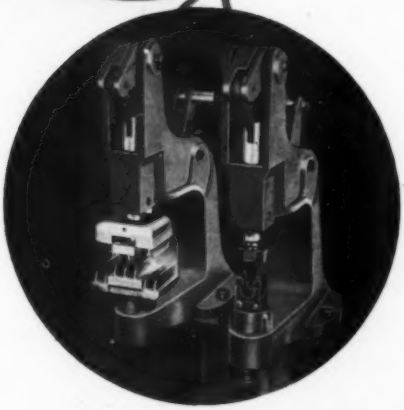
Kalamazoo Vegetable Parchment Company

PARCHMENT • KALAMAZOO 99 • MICHIGAN
BRANCH PLANTS: DEVON, PENNA. • HOUSTON, TEXAS

KVP

Cut LABOR COSTS 50% ON SAUSAGE END TIES

WITH FASTIE



Dramatic reports from plant after plant throughout the Sausage Industry prove conclusively that the NEW FASTIE METHOD of fastening artificial sausage casings is slashing high labor costs... in many plants as much as fifty per cent. Simultaneously this FASTIE METHOD is showing a ten per cent increased stuffing capacity.

Flattering letters from enthusiastic customers reveal the fact that FASTIE is fastening 600 casings per hour which is double the amount tied by the old-fashioned hand-tie method.

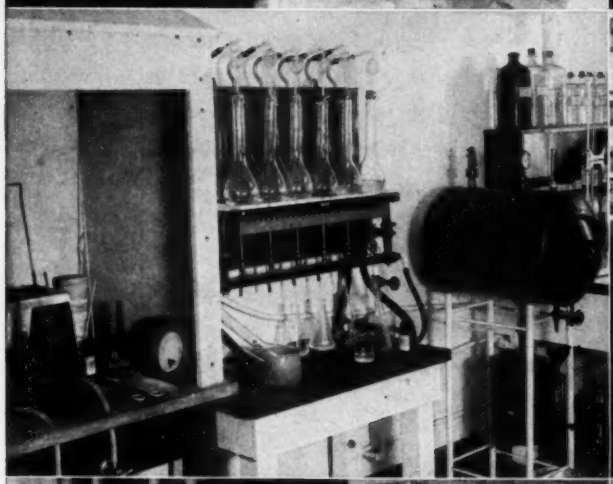
THESE LETTERS CONFIRM OUR STATEMENTS THAT FASTIE LOWERS LABOR COSTS, INCREASES STUFFING CAPACITY AND IMPROVES THE APPEARANCE OF SAUSAGE PRODUCTS

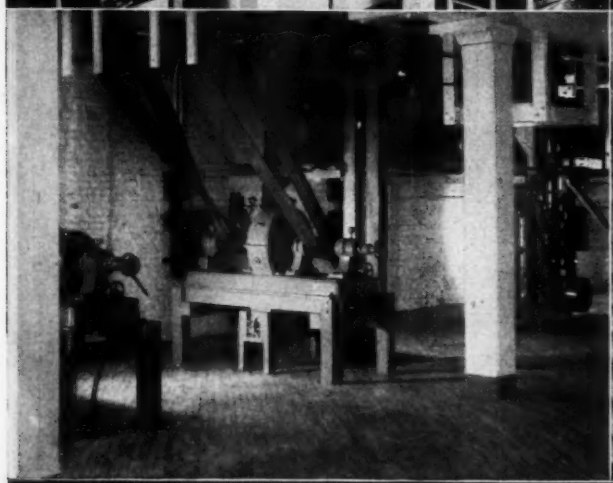
B.A.I. APPROVED . . . the U. S. Government has approved the use of FASTIE FASTENERS in all government inspected houses.

HERCULES FASTENERS, Inc. • 1140 East Jersey St., Elizabeth, N. J.

***United States Distributor*—JOHN E. SMITH'S SONS CO.**

***Canadian Distributor*—C. A. Pemberton & Co. Ltd., 187-189 Church Street, Toronto 2, Canada**





H. J. MAYER & SONS CO., INC.

6815 South Ashland Avenue, Chicago 36, Illinois

Plant: 6819-27 S. Ashland Ave.

In Canada: H. J. Mayer & Sons Co. (Canada) Limited, Windsor, Ontario

...here is a unique organization which can help

YOUR BRAND NAMES BECOME *"Buywords"*

NEVERFAIL

Pre-Seasoning

3-DAY HAM CURE

NEVERFAIL wins brand preference for ham packers because it develops a full-bodied, genuine, old-fashioned ham flavor . . . and then adds a spicy, aromatic goodness all its own.

NEVERFAIL is a combined curing and seasoning compound. A special blend of the choicest spices is incorporated with the curing salts. The *seasoning* therefore *goes in with the cure* . . . permeates every morsel and fibre of the meat . . . creates a really *distinctive,* taste-tempting flavor. At the same time, the NEVERFAIL 3-Day Ham Cure produces an even, appetizing pink color, and a firm meat texture which is tender and juicy but never soggy.

PRODUCTION ECONOMIES TOO!

NEVERFAIL-cured hams command top-of-the-market prices . . . yet actually cost *less* to produce. The shorter time in cure enables you to market your product faster and more economically. Furthermore, using this ready-mixed compound saves mixing your own preparation . . . eliminates one whole operation with its uncertainty and high labor cost. Write for complete information . . . and ask about using NEVERFAIL in your chopper and as a rubbing compound for *curing* and *Pre-Seasoning* bacon, sausage meat and meat loaves.

MAYER'S

Special

SEASONINGS

The time and labor they save provide reason enough to use Mayer's ready-mixed Special Seasonings. But what's even more important, these prepared seasonings give your meat specialties a consistently *uniform* flavor. And that flavor can be keyed *exactly* to the preference of *your* customers, wherever and whoever they are. Count on Mayer's experience and "know-how" to duplicate exactly your own seasoning formula . . . or to help you develop sales-making formulas for new products.

Mayer's Special Seasonings are made from the world's choicest *natural* spices, expertly sorted, ground, refined and blended. Every step in the process is laboratory controlled and pre-tested in our own sausage kitchen and curing cellar. Inquire about Mayer's Special Seasonings for the following and many other products.

Frankfurters	Cotta Salami	Pepperoni
Bologna	Chicken Loaf	Rouladen
Braunschweiger	Scrapple	Polish Sausage
Liver Sausage	Head Cheese	Blood Sausage
Goose Liver Sausage	Lyone	Cervelat
Summer Mettwurst	Pork Sausage	Landjager
Thuringer	Chili Con Carne	Meat Loaves
Salami	Mortadella	Etc. Etc.

We also produce a complete line of seasonings made with essential oils in salt or sugar base.

REPUBLIC Enduro STAINLESS STEEL

Tongue washing and trimming tables are but one of the countless applications for sanitary ENDURO Stainless Steel in the meat industry. A simple washing with warm water usually restores ENDURO'S sparkling surface in a hurry. Greasy or sticky substances are whisked away with soap and warm water or with standard cleaning preparations.

Improves Employee Relations

Easy to look at . . . easy to work with . . . Republic ENDURO Stainless Steel equipment pays immediate dividends in improved employee relations.

Lustrous ENDURO offers a constant invitation to complete cleanliness, wherever installed. It is so easy to clean—with a minimum of time and effort—that everyone takes pride in keeping it spotless. Thus, ENDURO helps create a bright, cheerful working atmosphere . . . makes work easier . . . gives employees new incentive.

And, long-lasting ENDURO retains its shining, sanitary surface indefinitely. It is solid stainless steel throughout, with nothing to wear off—never requires refinishing—cuts maintenance costs to lowest levels.

Talk with your equipment manufacturer NOW about putting Republic ENDURO Stainless Steel to work for you in helping to promote better employee relations. For additional information, write to:

REPUBLIC STEEL CORPORATION
Alloy Steel Division • Massillon, Ohio
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, New York

Republic REPUBLIC STEEL
ENDURO STAINLESS STEEL

Other Republic Products include Carbon and Alloy Steels—Pipe, Sheets, Bolts and Nuts, Tin Plate, Tubing, Stevens Barrels and Drums

Limp, greasy bacon packages annoy distributors, dealers, consumers, and lessen your quality reputation.

Does your BACON PACKAGE look like a dishrag ?

Lightproof

mullinix

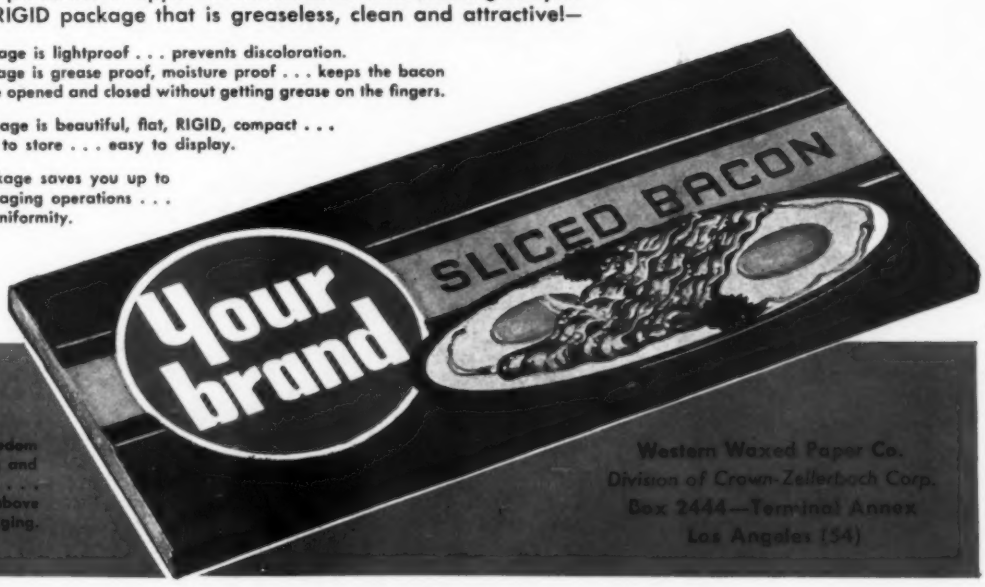
BACON PACKAGING IS RIGID!

Mullinix is the new, perfected wrapper which folded around bacon gives you a straight-edged, RIGID package that is greaseless, clean and attractive!—

The Mullinix Bacon Package is lightproof . . . prevents discoloration. The Mullinix Bacon Package is grease proof, moisture proof . . . keeps the bacon firm and fresh . . . can be opened and closed without getting grease on the fingers.

The Mullinix Bacon Package is beautiful, flat, RIGID, compact . . . easy to carry . . . easy to store . . . easy to display.

The Mullinix Bacon Package saves you up to 25% man hours in packaging operations . . . self-seals . . . assures uniformity.



Mullinix allows freedom in design for selling and quality appearance . . . lifts your brand above less inspired packaging.

Western Waxed Paper Co.
Division of Crown-Zellerbach Corp.
Box 2444—Terminal Annex
Los Angeles (54)

MARYLAND'S POULTRY GETS TO MARKET

• FRESH • SAFELY • PROFITABLY

...BECAUSE

THERMO KING

MECHANICAL TRUCK REFRIGERATION

IS OUT IN FRONT!

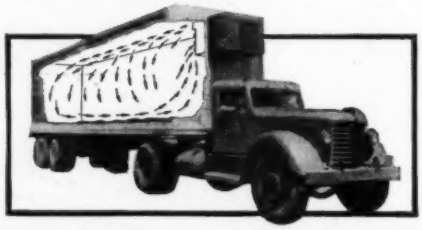
"We have moved well over 500 loads of frozen chickens and frozen foods since installing Thermo King," writes C.M. Hogarth, Executive Vice President, Victor Lynn Lines, Inc., of Salisbury, Maryland, "and we have nothing but the highest praise for the service Thermo King has given us. We have even loaded chickens on Friday for delivery on Monday, without a single instance of spoilage or loss. In our book, that's a ***real*** refrigeration job!"

Mr. Hogarth's comments express the feeling of thousands of truckers who have discovered how to transport perishable cargo safely—with THERMO KING.

No matter what the ***outside*** temperature may be, Thermo King automatically holds the ***inside*** temperature even and constant . . . it stays where you set it.

We'll gladly furnish detailed information concerning your individual needs.

Thermo King units, light and compact, are easily installed in any straight truck or trailer. Forced circulation insures ***complete*** protection of every perishable cargo . . . meat, frozen foods, dairy products.

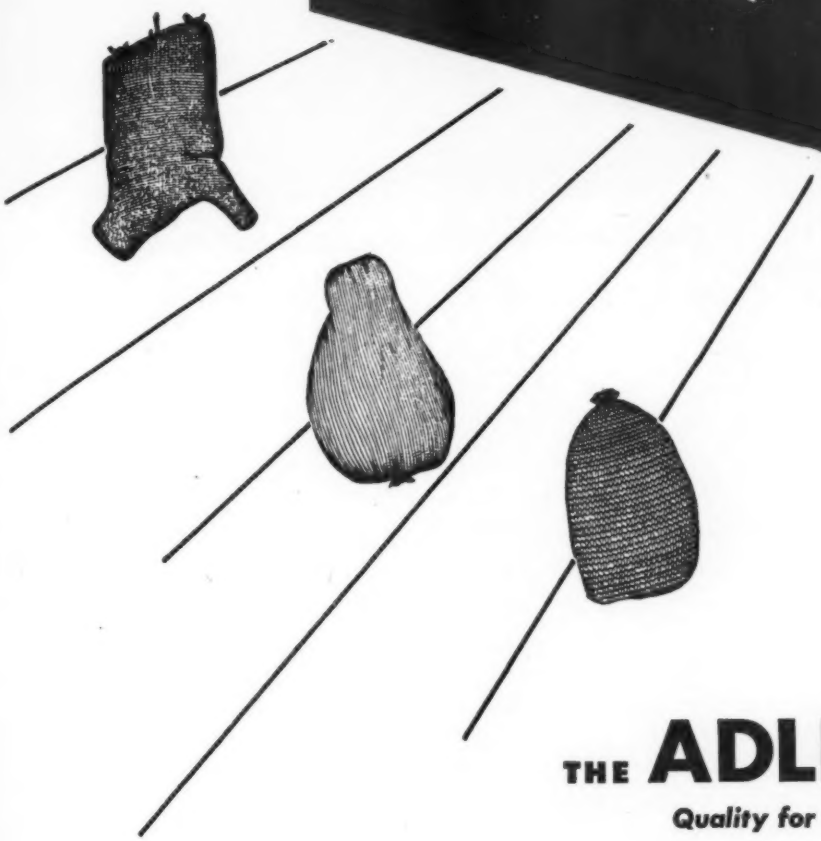


U. S. THERMO CONTROL CO.

44 SOUTH 12th STREET MINNEAPOLIS 4, MINN.

LARGEST BUILDERS OF MECHANICAL TRUCK REFRIGERATION

whatever your product
there's an
ADLER STOCKINETTE
to cover it



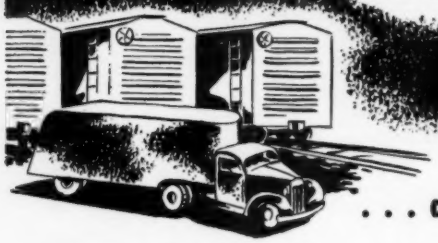
THE ADLER COMPANY
Quality for Over 80 Years

Main Office: Cincinnati 14, Ohio
108 West Sixth St. — Los Angeles 14, Cal.
222 West Adams St. — Chicago 6, Ill.

WORLD'S LARGEST KNITTERS OF STOCKINETTE FABRICS

Here's the Ice to Ask For

Liquid RED DIAMOND Dry Ice



Shipments by truck or rail enjoy maximum protection with RED DIAMOND DRY ICE. It cuts shipping costs by helping to eliminate costly re-icing delays. RED DIAMOND DRY ICE is readily obtainable from coast to coast.

. . . at these conveniently-located plants and warehouses:

ALBANY 4, N. Y., Bridge and Mill St.
ALLENTOWN, Pa., 4th and Susquehanna Sts. (Susquehanna Super Garage)
ALTOONA, Pa., 1709 7th Avenue
ATLANTA, Ga., 743 McDaniel St., S. W.
BALTIMORE 2, Md., 1300 Guilford Avenue
BELLEVILLE, N. J., 666 Washington St.
BOSTON, Mass., 136 Broadway St. Cambridge 42
BUFFALO 10, N. Y., 879 Seneca Street
CHARLOTTE 2, N. C., 332 W. Stonewall St. (Piedmont Cold Storage Corp.)
CHICAGO 23, Ill., 3100 S. Kedzie Avenue
CINCINNATI 4, Ohio, 636 Burns St.
CLEVELAND 2, Ohio, 1318 W. 58th Street
COLUMBUS 8, Ohio, 1057 W. Goodale Blvd.
COUNCIL BLUFFS, Ia., (Central States Oil Co.), Broadway and 32nd Sts.
DALLAS 2, Tex., Office—1118 Jackson St. Plant—805 McKinney Ave.
DAYTON 2, OHIO, 329 Wilkinson Ave.
DENVER 5, COLO., 3300 Walnut St.
DETROIT 8, Mich., 4238 Twenty-Fourth St.
FORT WAYNE 2, Ind., Clay and Brackenridge Sts.
FORT WORTH 1, Tex., P. O. Box 904 901 W. Vickery Blvd. (Johnson Storage and Dist. Co.)
FRESNO 18, Calif., 2035 Cherry Ave. (Valley Ice Company)
GRAND RAPIDS 2, Mich., 134 Grandville S.W.
GREENSBORO, N. C., 311 E. Washington St. (Tatum-Dalton Transfer Co.)
HARRISBURG, Pa., 15th and Chestnut Sts.
HOUSTON 1, Texas, P. O. Box 2174 2110 Center St.
HUNTINGTON, W. Va. (c/o Booster Stores, 2005 Tenth Ave.)
INDIANAPOLIS 3, Ind., Standard and Division Sts.
JACKSONVILLE 1, Fla., P. O. Box 84 1932 E. Adams St.
KANSAS CITY 7, Mo., 1339 Liberty St.
LOS ANGELES 23, Calif, 2600 E. 12th St.
LOUISVILLE 2, Ky., 204 N. Floyd St.
MEMPHIS 2, Tenn., 1099 Florida St.
MIAMI, Fla., 1047 N. W. 22nd St.
MILWAUKEE 2, Wis., 189 N. Jackson St.
MINNEAPOLIS 15, Minn., Office—501 Sixth St., S.; Plant—80—14th Ave., N. E.
NEW HAVEN 13, Conn., 98 Rowe St.
NEW ORLEANS 3, La., 627 Felicity St.
NEW YORK 17, N. Y., Office, 155 E. 44th St. Plant—4-63 48th Ave., Long Island City.
NORFOLK 4, Va., 1180 Calvert St.
OAKLAND 7, Calif., Fourth and Clay Sts. (Interurban Express Co.)
OKLAHOMA CITY 1, Okla., P. O. Box 688 317 N. Western Ave.
OMAHA 2, Neb., 1715 Mason St.
PEORIA 1, Ill., Foot of Edmund St.
PHILADELPHIA 34, Pa., 2251-71 E. Tioga St.
PHOENIX, Ariz., 246 S. First Ave.
PITTSBURGH 12, Pa., 3101 Preble Ave., N.S.
PORTLAND, Ore., 1507 Johnson St., N. W. (Baggage & Omnibus Transfer Co)
PROVIDENCE 3, R. I., 27 Brook St. (Danis Transportation Co.)
READING 8, Pa., 140 S. Front St. (Highway Express Lines)
ROCHESTER 8, N. Y., 257 East Exchange St. Ice & Cold Storage Co. of Calif.)
SACRAMENTO 3, Calif., 831 "D" St., (Natl.
SALT LAKE CITY, Utah, 45 So. 3rd West
ST. JOSEPH 3, Mo., 5th and Pattee St. (St. Joseph Truck Terminal)
ST. LOUIS 3, Mo., 3417 Bernard St. (near 3400 Market St.)
ST. PAUL 1, Minn., 680 E. Minnehaha
SAN ANTONIO 6, Tex., P. O. Box 1053 302 Blue Star St.
SAN FRANCISCO 5, Cal., 236 Steuart St.
SAN JOSE 10, Cal., 160 So. First St. (Security Truck Lines)
SEATTLE 4, Wash., 5021 Colorado Ave.
SIOUX CITY 19, Iowa, 1219 Fifth St., (Union Transfer Co.)
SIOUX FALLS, S. D., 416 E. 8th St., (Sioux Distributing Co.)
SOUTH BEND 11, Ind., 406 S. Columbia St. (Columbia Storage Whse.)
SPOKANE 11, Wash., North 730 Washington Ave. (International Fuel Co.)
SYRACUSE 1, N. Y., 524 E. Water St. (Van Transportation Lines)
TACOMA, Wash., 1821 Dock St (Inter-City Auto Freight Depot)
TAMPA 1, Fla., 805 Morgan St. (Tampa Cold Stge. & Whse. Corp.)
TERRE HAUTE, Ind., 541 N. 5th Street (The Mineweld Co. of Ind., Inc.)
TOLEDO 11, Ohio, Box 27 - Station "G" (Buckeye and Terminal Ry.)
TOPEKA, Kans., 115 Jackson St. (City Ice Co.)
TULSA 3, Okla., 207 N. Boston St.
WALLA WALLA, Wash., First & Poplar (Consolidated Freightways Terminal)
WASHINGTON, D. C., Alexandria, Va., 510-12 N. Fayette St.
WICHITA 2, Kans., 420 N. Rock Island (Jack Rabbit Dely. Service)
YAKIMA, Wash., 1st So. & Walnut (Western Fuel Co.)

CANADA

EDMONTON, Alberta, 10523 123rd St.
HALIFAX, N. S., Commercial and Park Sts. (Dartmouth)
MONTREAL 16, Que., 8400 Decarie Blvd.
TORONTO, Ont., 41 Mill St.
VANCOUVER, B. C., Eleventh and Yew Sts.
WINNIPEG, Manitoba, 521 Archibald St. (St. Boniface)

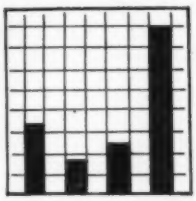
THE Liquid CARBONIC CORPORATION
3110 South Kedzie Avenue, Chicago 12, Illinois

Branches in Principal Cities of the United States and Canada • London, England • Havana, Cuba

Manufactured in Montreal for the Canadian Trade

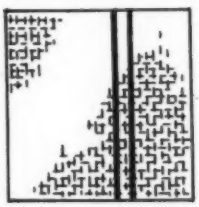
"Stop Beefing about Beef Shrouds"

Tufedge IS BACK!



A B C Tufedge

Response to the return of TUFEDGE has been great. Its wartime absence served only to strengthen further the demand for its unsurpassed quality. Statements demonstrate that TUFEDGE invariably outlasts all other shrouds—in some cases as much as 20 to 1! TUFEDGE means economy.



Look for the Blue Stripes

Accept only the original. TUFEDGE is identified by double blue stripes woven into the fabric which instantly designate the pinning edge. Workers automatically know where to insert the pins. Result: less wear, thus longer life. Think of the blue stripes when you think of TUFEDGE!

WRITE TODAY—We are headquarters for quality meat packers' textiles. Tell us your needs—we will suggest the right textile for the right job.

HAM STOCKINETTES • FRANK BAGS • LARD PRESS CLOTHS
BOLOGNA BAGS • CHEESE CLOTH • TARPAULINS • BEEF BAGS • LIBERTY BEEF SHROUDS • OTHER TEXTILES

Tufedge
BEEF CLOTHING
Reg. U. S. Pat. Off.
LOOK FOR THE BLUE STRIPE

Check these **Tufedge** BEEF CLOTHING REG. U.S. PAT. OFF. *features:*

1. Reinforced extra wide pinning edge.
2. Exclusive open-mesh weave for quick, uniform chilling and perfect aeration.
3. More absorbent threads for better beef bleaching.
4. Tougher threads for better beef bleaching.
5. Blue identification lines for pinning edge make a simpler and more efficient clothing job.
6. TUFEDGE outlasts ordinary shrouds.

THE CLEVELAND COTTON PRODUCTS CO.
★ CLEVELAND 14, OHIO ★

Loaves don't linger in
SYLVANIA® CASINGS

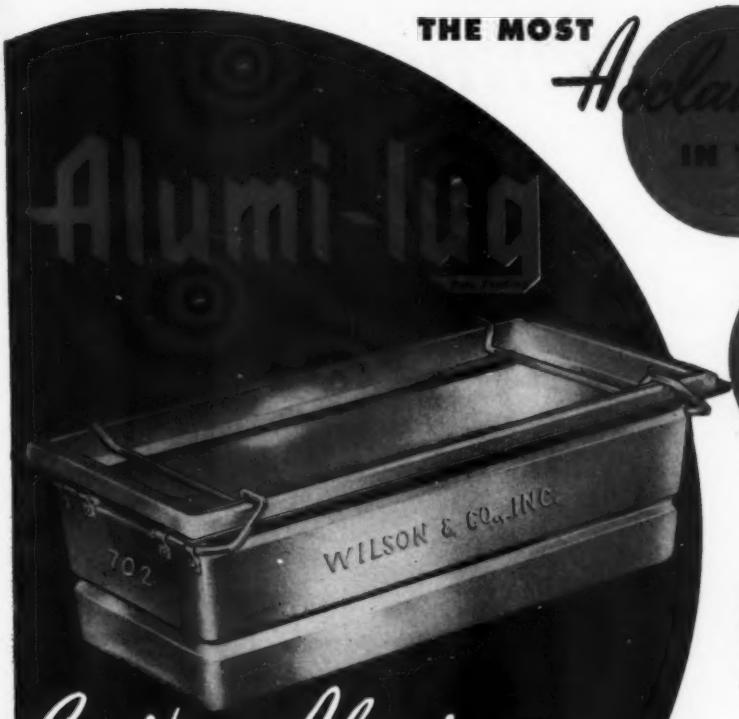
LOAVES really get a move on when packed in Sylvania Casings. Their appetizing appearance attracts the customers' eyes . . . their freshness and sanitary qualities build repeat sales. You can depend on Sylvania Casings to keep loaves in tip-top condition . . . minimize shrinkage and loss of weight. Your retail customers find them easier to handle . . . give them a featured spot in the display case.

Remember, Sylvania Casings make it possible for you to keep your name on your product even after it's partially sold.

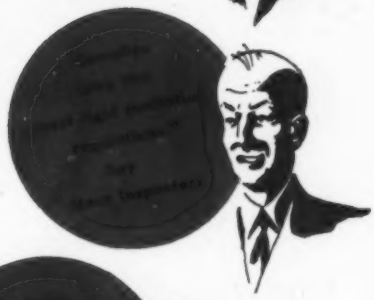
Made only by SYLVANIA DIVISION
AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
Plant: Fredericksburg, Virginia ★ *General Sales Office:* 122 E. 42nd Street, New York 17, N. Y.
Casings Division: 111 North Canal Street, Chicago 6, Illinois
Distributor for Canada: Victoria Paper & Twine Co., Ltd., Toronto

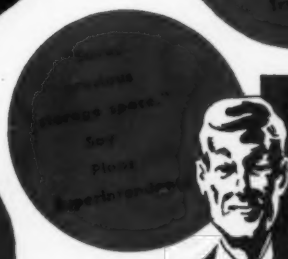
SYLVANIA CELLOPHANE®

THE MOST *Acclaimed* MEAT CONTAINER IN THE PACKING INDUSTRY!



Sanitary Aluminum
MEAT CONTAINER FOR DELIVERY AND STORAGE



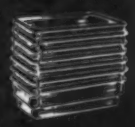


Modernize your meat handling methods with ALUMI-LUG, the completely sanitary meat delivery and storage container that has reduced transportation costs per hundredweight to the lowest figure ever known in the packing industry.

Compare ALUMI-LUG with other types of meat containers. Compare its amazing light weight of *11¼ pounds.* Compare its *10-year life expectancy.* Compare its *strength.* And finally, compare the phenomenally low transportation cost of *less than 5 cents per hundredweight.*

SPECIFICATIONS Inside dimensions 32" x 13½" x 10" deep. Capacity 100-125 pounds. Weight, 11¼-lbs. less than half the weight of other containers of same capacity. Special aluminum alloy gives ALUMI-LUG superior strength to withstand severe drop tests, road shocks. Welded construction eliminates bacteria traps. Can't chip — no plating to wear off. Fully approved. Completely sanitary.

TAPERED CONSTRUCTION FOR COMPACT NESTING when not in use. Empty ALUMI-LUGS may be stacked ceiling high without danger of jamming or sticking.



COMBINATION STACKING BAR AND HANDLE makes it possible to stack 5 or more ALUMI-LUGS with up to 1,000 pound load. Stacking bar prevents crushing meat.

FIRM NAME EMBOSSED FREE. Name is permanently embossed on both sides of container and insures against loss. Steel die numbers facilitate identification.

For full information write to

J. M. GORDON CO.
Manufacturers and Marketers
756 South Broadway • Los Angeles 14, California

We're catching up!

Production's galloping ahead—and although orders are still slightly in the lead at present, we're hoping to fill them soon.

The outlook is bright because our facilities for turning out cans have been vastly expanded, and today many raw materials are being scratched off the "shortage" lists.

Please accept our thanks for your patience during the "shortage years," and don't hesitate to call us if you'd like further information. Just contact the nearest Continental sales office.

Lard and compound cans and pails are available in 4, 8, 25, 50 and 110-lb. sizes. Either flaring or straight side. Plain or lithographed with your own design.

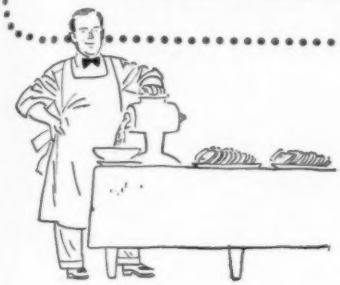
CONTINENTAL CAN COMPANY

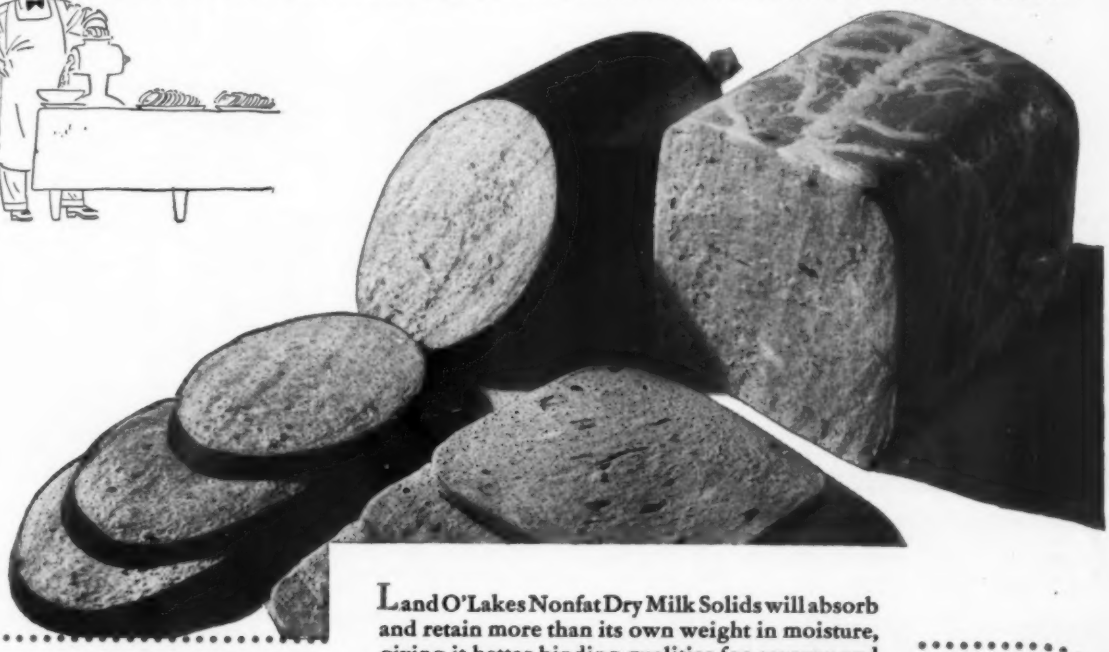
100 EAST 42nd STREET, NEW YORK 17 N. Y.

Sausage and Loaves

bind better · slice better · taste better · sell better

Made with Land O' Lakes Nonfat Dry Milk Solids





Land O'Lakes Nonfat Dry Milk Solids will absorb and retain more than its own weight in moisture, giving it better binding qualities for sausage and loaves. This improved binding results in even, clean slicing, without crumbling or waste. But most important, its addition to your regular formulas results in a marked improvement in nutrition and flavor.

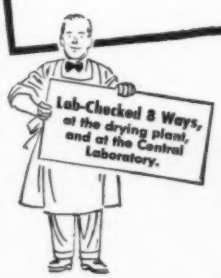
Remember, Land O'Lakes Nonfat Dry Milk Solids is not a filler or adulterant. Sausage made with it is superior to the all-meat product as a smooth, highly palatable source of added lactose, milk proteins, milk minerals and vitamins.

MEAT PRODUCTS MADE WITH LAND O'LAKES NONFAT DRY MILK SOLIDS

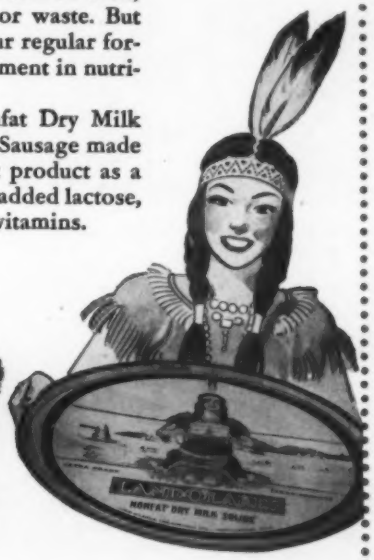
- Sausages
- Bologna
- Frankfurters
- Luncheon Loaf
- Farm Style Sausage
- Pressed Ham

. . . and many other meat and sausage specialties

Branches and brokers in principal cities, or write direct to:

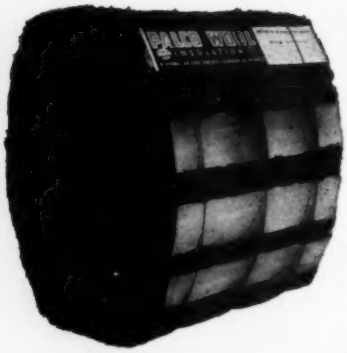


LAND O'LAKES
CREAMERIES, INC.
MINNEAPOLIS 13, MINNESOTA
Also Famous For LAND O' LAKES SWEET CREAM BUTTER



"Land O'Lakes" and the Indian girl are registered trade marks of Land O'Lakes Creameries, Inc.

FROM BARK TO BALE...the story of PALCO WOOL



For your protection every bale is labeled with the PALCO WOOL trademark. Look for it! Accept no substitutes!

To convert durable Redwood tree bark into PALCO WOOL—the highly efficient and economical insulating material used in locker and cold storage plants and home installations—requires a process of controlled refinement under exacting standards. The following photographs of operations at our Scotia mills today, illustrate some of the careful preparations which PALCO WOOL undergoes to assure a product of uniform high quality.

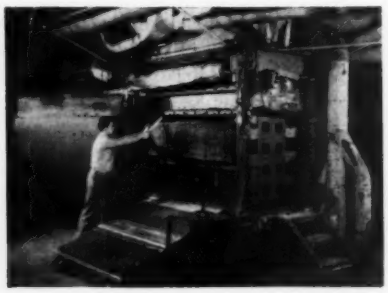
1 From rugged slopes of northern California's coast, giant Redwood logs are brought to the Mills. Here the thick bark is carefully separated from the wood.

2 Bark peeled from hundreds of trees is stored in this large warehouse. Crane picks up a load about to enter the elaborate refining system.

3 Chunks of bark mechanically conveyed to the huge hammermill where shredder jaws reduce the material to a fibrous mass for further processing.

4 Through willowing, condensing and lumper picker machines, dust, extraneous matter, and unshredded fibres are removed to assure uniform fine quality.

5 In this battery of driers moisture is removed from the fibres to make PALCO WOOL light and dry. Then it is flame-proofed in the Saferized process.

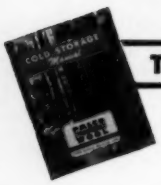


6 Compressed bales of PALCO WOOL are cut to 100 lb. 24" cubes for easy handling. Fluffing at installation restores the resilient fibres to original volume.

7 Finished product ready for shipment to distributors and applicators in United States and Canada. *PALCO WOOL is now available for immediate delivery.*

For complete details on PALCO WOOL and its Insulation applications, send for the new Cold Storage Manual.

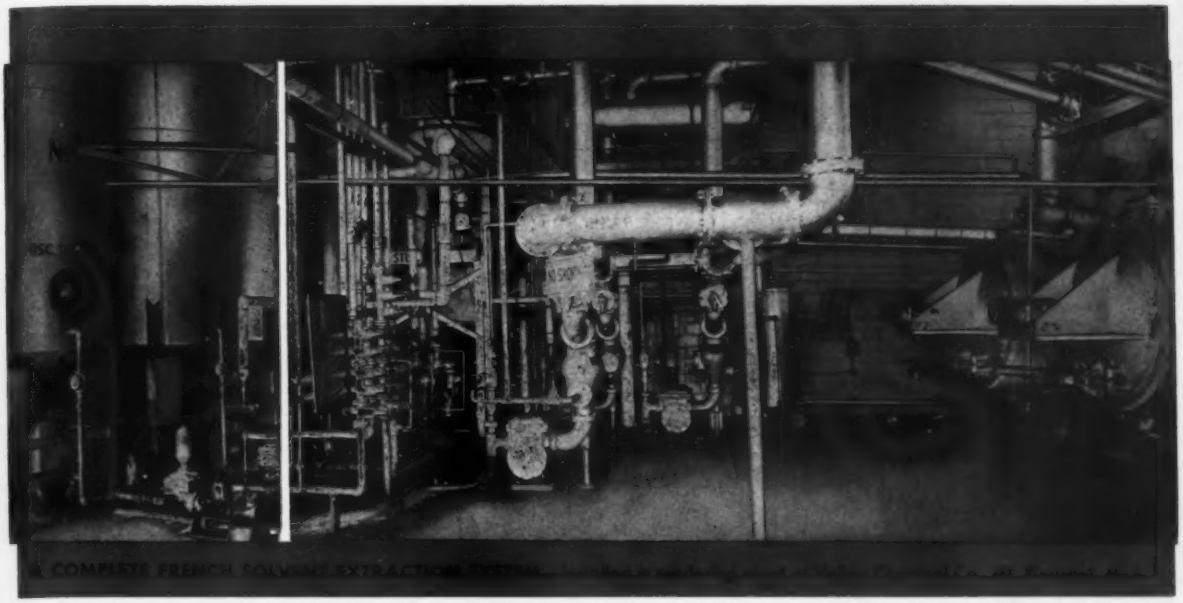
FLAME-PROOF SAFERIZED PROCESS



THE PACIFIC LUMBER COMPANY

100 BUSH STREET, SAN FRANCISCO 4, CALIFORNIA
NEW YORK • CHICAGO • LOS ANGELES

PALCO INSULATION WOOL



A COMPLETE FRENCH SOLVENT EXTRACTION SYSTEM

FRENCH SOLVENT EXTRACTION

The French Solvent Extraction method for removing tallow, grease and oils from shop scrap, cracklings, carcasses, slaughter house offal and other grease or oil-bearing animal products is the most efficient, economical and sanitary system in use today. The French system yields substantially higher grease extraction with an absolute minimum of solvent losses.

The entire cooking and extraction process is carried on in an entirely closed system thus eliminating all odors during processing. Only extracted and deodorized cracklings are present in the cooker when it is opened for discharging.

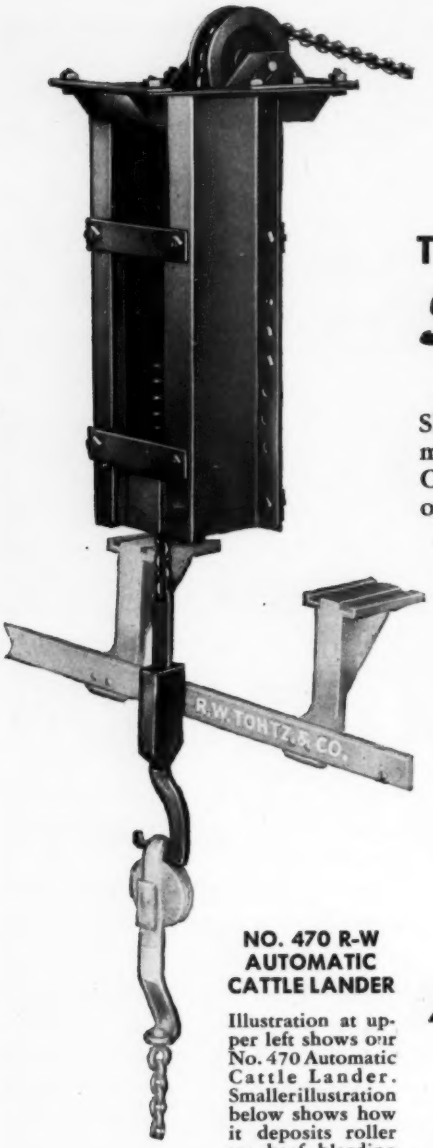
After the raw material is properly cooked, free grease may be drawn off and the solvent extraction process started by pumping solvent in the proper amount to the cooker-extractor. Each batch of solvent is termed a wash and any desired number of washes may be used. Usually not more than three are required to reduce the fat content to approximately 3%.

A measurably superior grade of grease and tallow is produced by this process. The cooking process can be regulated to produce the desired color cracklings, of low grease but high protein content and finished cracklings command uniformly higher prices! Grease yield is materially higher; solvent losses are greatly lowered! French equipment can be engineered to produce a system that requires no manual handling of produce during processing, or it can be combined with present equipment under modified manual methods. Construction is sturdy, dependable and trouble-free. ***Write for the complete story of French Solvent Extraction . . . the last word in modern inedible rendering***

The French Oil Mill Machinery Co.

FRENCH MACHINERY—
ALWAYS ENGINEERED FOR
LIFETIME SERVICE

PIQUA, OHIO



NO. 470 R-W AUTOMATIC CATTLE LANDER

Illustration at upper left shows our No. 470 Automatic Cattle Lander. Smaller illustration below shows how it deposits roller on beef bleeding rail.

THE MARK OF MODERN *Slaughtering Equipment*

The R-W trade mark identifies a complete range of Beef, Calf, Sheep and Hog Slaughtering Equipment, with all the auxiliary machinery required by packing plants for Pork Cutting, Sausage, Casing Cleaning, Ham and Bacon Processing and Rendering operations.

H. W. Tohtz, our president, is the dean of all packing plant equipment executives. Formerly shop superintendent for Brecht, St. Louis, and Bonnell-Tohtz, this places the R. W. Tohtz & Company squarely in line with nearly 100 years of experience with packing plant needs. Mr. Tohtz's sons, R. W. and H. O. Tohtz, are likewise active in this concern, offering direct personal and experienced handling of your requirements. Not many concerns can show such continuity of experience. It explains why R-W equipment and service is always a little better than expected.

R-W Architectural & Engineering Service

In addition to designing and constructing every type of packing plant equipment and machinery, we engineer new packing plants or alterations in existing plants. Where individual problems arise we supply specialized equipment to solve them. We are now completing the entire installations for frigorificos and packing plants not only in the U.S. but also for Mexico and South America. It will pay you to consult us. Drop us a line today, discussing your problem. Catalog free on request.

Prompt shipment everywhere from our St. Louis Plant.

R. W. TOHTZ & COMPANY
Makers of R-W Packing Plant Machinery
4875 EASTON AVENUE • ST. LOUIS, 13, MISSOURI

150 HP Cyclotherm Steam Generator

We Harness the Cyclone's Force

The furnace tube of a Cyclotherm Steam Boiler in operation houses a cyclone of fire—safely and automatically controlled. By applying to combustion the same principle that gives a ruthless "twister" its destructive power, Cyclotherm engineers offer the world a new and better steam boiler, one that does more efficient work for you at less cost than you have ever known.

The patented Cyclotherm method consists of burning the atomized fuel in a rapidly revolving cyclonic flame completely in the first pass. This highly radiant cyclone of flame travels relatively slowly through the length of the furnace tube with the result that heat is radiated intensely and uniformly.

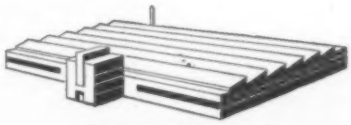
Cyclotherm units of 80 to 300 HP are equipped with an automatic modulating steam pressure control system which provides the proper quantitive fuel-air relationship for all firing rates with oil (or gas) and air pressure constant. Firing rates are modulated from 30% to 100% of rated capacity in response to steam demand. Units of 10 to 60 HP utilize the "on-and-off" method of operation which is immediately responsive to thermostat or pressure control and is more economical on small boilers. Both methods of firing are guaranteed 80% efficient.

Cyclotherm units are manufactured in sizes from 10 to 300 HP with operating pressures from 15 to 200 psi and a steam output of from 345 lbs. per hour from feed water at 212° F to 10,300 lbs. per hour. For greater steam requirements, a battery of Cyclotherms is recommended.

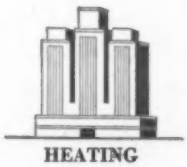
Prompt factory delivery assured.

For further information write for our specially prepared booklet 316Z.

POWER



PROCESSING



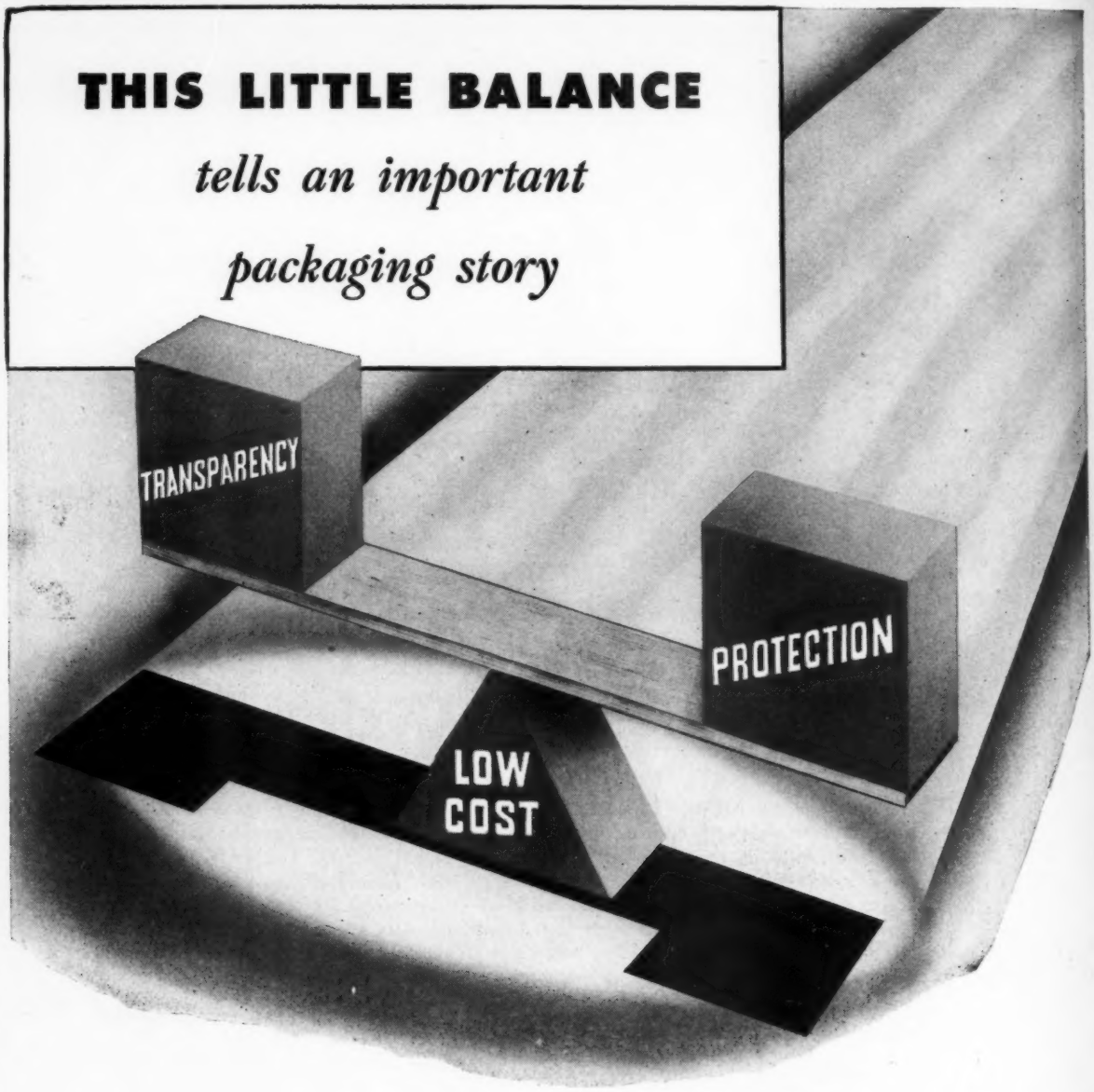
HEATING

CYCLOTHERM STEAM GENERATORS

CYCLOTHERM CORPORATION, 90 BROAD STREET, NEW YORK 4, N. Y.

THIS LITTLE BALANCE

tells an important packaging story



YOU STRIKE THE RIGHT BALANCE WITH

DuPont Cellophane

Shows what it Protects—at Low Cost

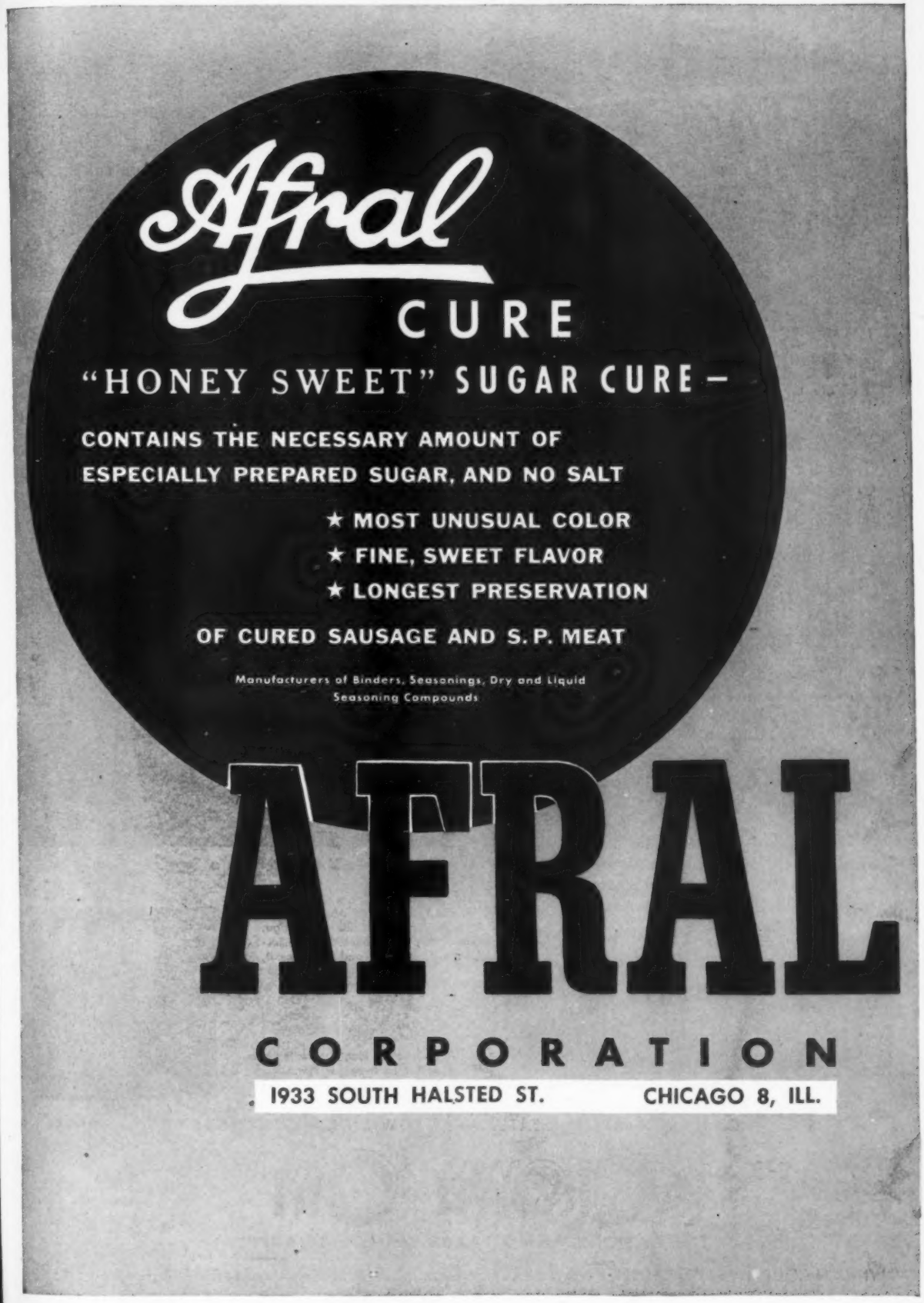
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

IT REPRESENTS a combination of properties that make Du Pont Cellophane the balanced packaging material.

There's product visibility that is such a powerful force in modern merchandising. There's chemically tailored, moistureproof protection that safeguards freshness and flavor—keeps your product clean and sanitary. Finally, there's the *economy* so necessary in the competitive days ahead. You'll find the proper balance of these advantages in Du Pont Cellophane.

DU PONT
REG. U.S. PAT. OFF.

E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Del.


Afral
CURE
"HONEY SWEET" SUGAR CURE—
CONTAINS THE NECESSARY AMOUNT OF
ESPECIALLY PREPARED SUGAR, AND NO SALT
★ MOST UNUSUAL COLOR
★ FINE, SWEET FLAVOR
★ LONGEST PRESERVATION
OF CURED SAUSAGE AND S. P. MEAT
Manufacturers of Binders, Seasonings, Dry and Liquid
Seasoning Compounds
AFRAL
CORPORATION
1933 SOUTH HALSTED ST. CHICAGO 8, ILL.

CANNERS LIKE CROWN SERVICE...

THE G. S. SUPPIGER CO.
PACKERS OF FAMOUS BROOKS BRAND FOODS

Mr. G. S. Suppiger (right), president, and Mr. Herbert H. Droste (left), vice president and treasurer, of The G. S. Suppiger Co. conferring with Victor Kronold (center) St. Louis District Sales Manager of Crown Can. The conference is in the St. Louis, Mo., offices of The G. S. Suppiger Co.

Display of company products which feature Brooks Brand.

Battery of Cooking Retorts in a Suppiger Plant.

Belleville, Ill. Plant . . . original location where Gerhart S. Suppiger started 20 years ago. Other Suppiger Plants are located at Collinsville, Ill., Converse, Indiana, and Mt. Summit, Indiana.

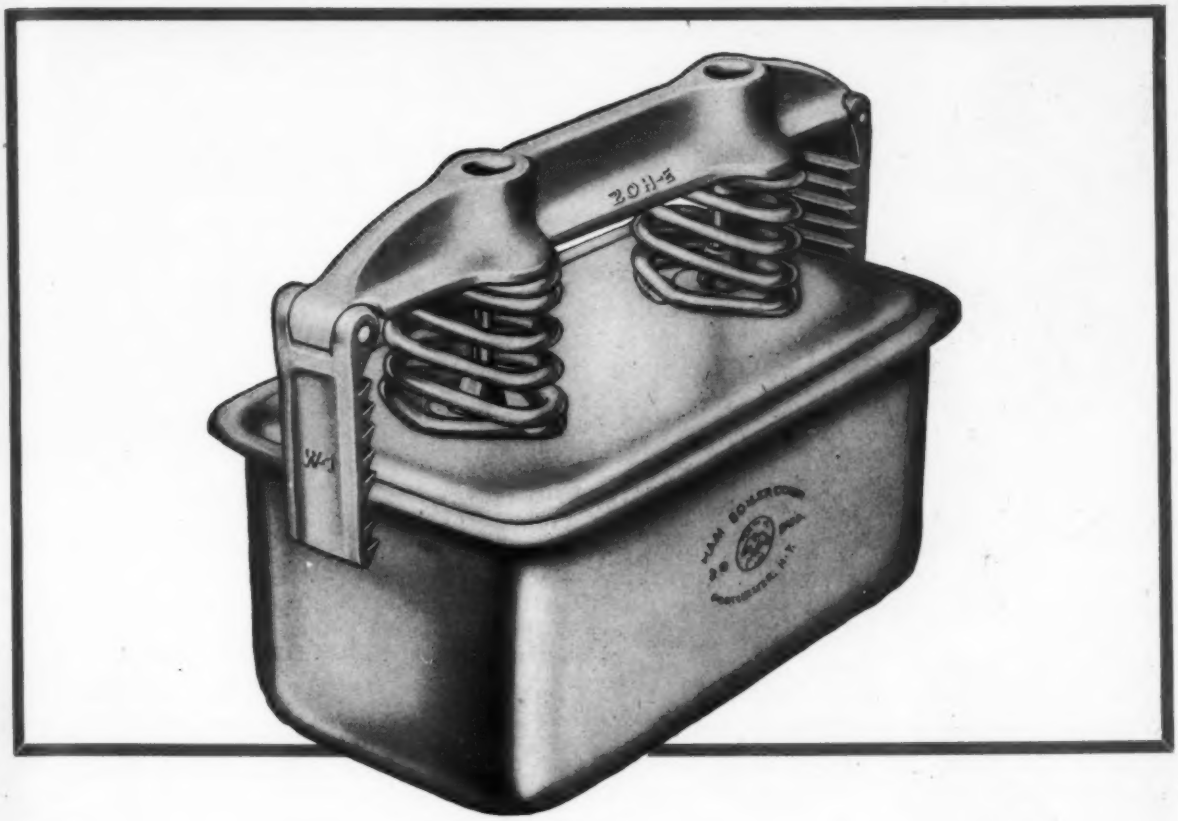
Mike Schotter, Plant Production Manager for all Suppiger Plants.

ONE OF A SERIES FEATURING CROWN CAN CUSTOMERS

CROWN CAN

THE NATION'S THIRD LARGE SOURCE OF SUPPLY

CROWN CAN COMPANY • PHILADELPHIA • Baltimore • Chicago • St. Louis • Houston • Orlando • Fort Wayne • Nebraska City



LOAF STUFFER

FOOT PRESS

Over 100 sizes... in 10 different shapes

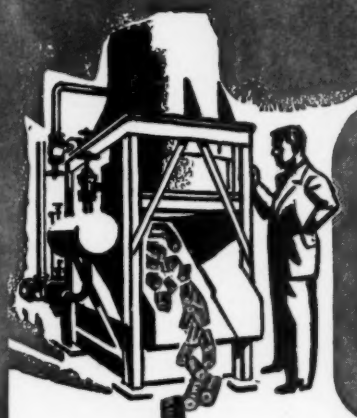
Adelmann offers the most complete line available. Over 100 sizes, in ten different shapes. All in Cast Aluminum—some in Stainless Steel. Ask for booklet "The Modern Method", listing all and containing valuable ham boiling hints.

Adelmann Ham Boilers have unusual and exclusive features, with demonstrated practical advantages. Elliptical springs, self-sealing and non-tilting cover, simplicity of operation, easy cleaning, and long life—all contribute their part toward successful results. Hams are firmly moulded, have full flavor, and appetizing appearance. Hams produced in Adelmann Ham Boilers really **sell!**

HAM BOILER CORPORATION

Office and Factory, PORT CHESTER, N. Y.

ADELMANN — "The Kind Your Ham Makers Prefer"



Vogtice

THE ALL-PURPOSE SIZED ICE

VOGTICE as produced by the Vogt Automatic Tube-Ice Machine is a clear, hard, sized ice of can-ice quality and appearance frozen from RAW water inside of tubes not exceeding 2″ in diameter. It has a lower initial temperature than ice made by other systems due to the direct application of the refrigerant to the ice freezing surface.

Either "cylinder" or "crushed" ice may be had from the same unit by regulation of the thickness of the ice cylinders prior to discharge to the adjustable cutter which is integral with the machine.

SOME VOGTICE CUSTOMERS

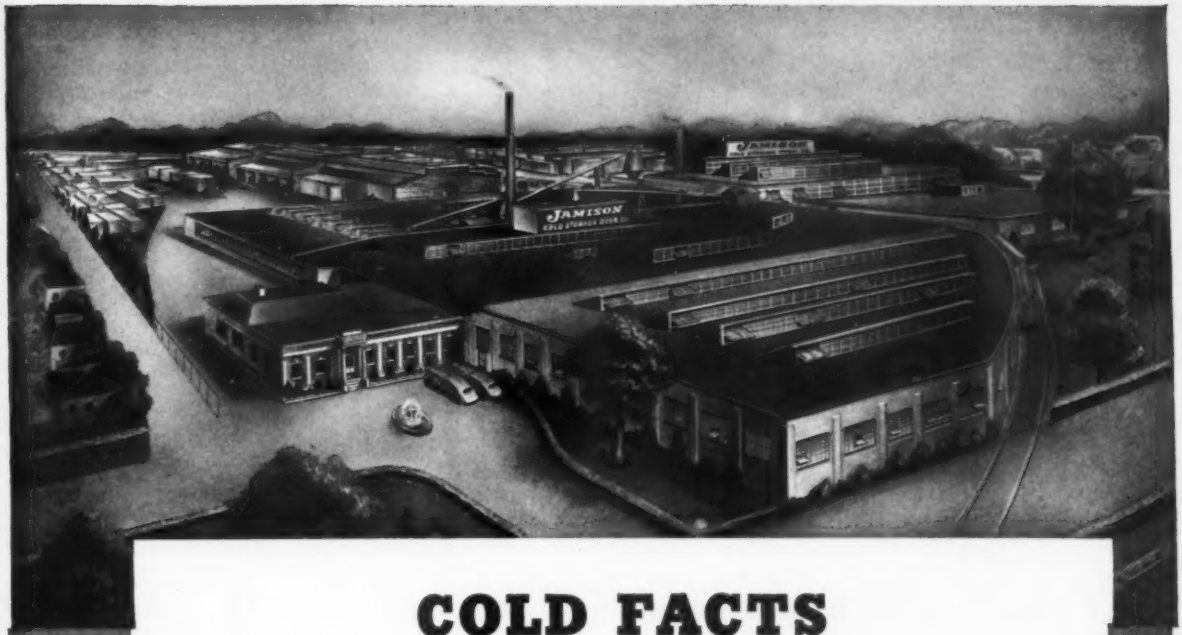
CITY ICE AND FUEL CO.
St. Louis, Mo.
AMERICAN ICE CO.
Washington, D. C.
HOTEL STATLER
Washington, D. C.
ROOSEVELT HOTEL
New Orleans, La.
TELLING-BELLE VERNON DAIRY
Cleveland, Ohio

CHEVY CHASE DAIRY
Washington, D. C.
RATH PACKING COMPANY
Waterloo, Iowa
ARMOUR AND COMPANY
Brazil, S. A.
DUPONT DYE WORKS
Carneys Point, N. J.
HOLLAND COLOR & CHEMICAL CO.
Holland, Mich.

GROW BROTHERS FISHERY
Painesville, Ohio
H. AND H. POULTRY CO.
Selbyville, Delaware
U. S. NAVY DEPARTMENT
BLUE BOAR CAFETERIAS
Louisville, Ky.
SAN MIGUEL BREWERY
Manila, P. I.

HENRY VOGT MACHINE CO., Inc., Louisville 10, Ky.
Branch Offices: New York Chicago, Cleveland, Philadelphia, Dallas

Vogt — AUTOMATIC TUBE-ICE MACHINE



COLD FACTS

1. JAMISON'S Prices Are Down

The prices of all Jamison, Stevenson, Victor and NoEqual Doors have been markedly reduced in the last 30 days. These prices are in line with our 50-year-old policy of "Maximum quality at minimum prices."

2. JAMISON'S Quality Is Up

The quality of most materials now being received is gradually improving. New equipment promises improved workmanship. If all factors involved continue to follow this trend, the day will come when the Jamison line of cold storage doors will once again be up to pre-war standards.

3. JAMISON'S New Plant Is Up

The newly enlarged Jamison plant is the greatest, most modern and most completely equipped plant in the world exclusively devoted to the manufacture of cold storage doors.

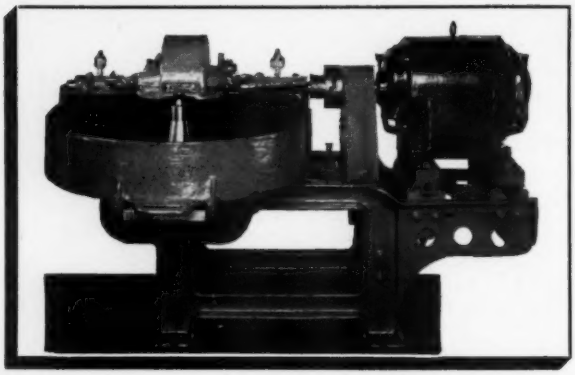
4. JAMISON'S Production Is Up

After nearly half a century of specializing in this field, we are now turning out more Jamison, Stevenson, Victor, and NoEqual Doors than ever before. This, coupled with modern machines and streamlined production methods, makes it possible to announce lower prices.

● FOR FULL INFORMATION on the new lowered prices . . . or for the address of your nearest branch . . . write JAMISON COLD STORAGE DOOR COMPANY, Hagerstown, Maryland.

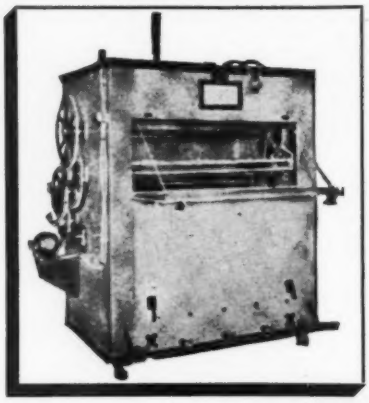
JAMISON
COLD STORAGE DOORS

Branches in Principal Cities, Coast to Coast



RANDALL PERFECTION CUTTER

The famous Randall Perfection Cutter shown at left can help you increase production with its fast, accurate and highly efficient action. Available in a complete range of sizes from 200 lbs. to 750 lbs. capacity, with speedy, efficient, self-unloader. Increase your production with this sturdy Perfection Cutter.

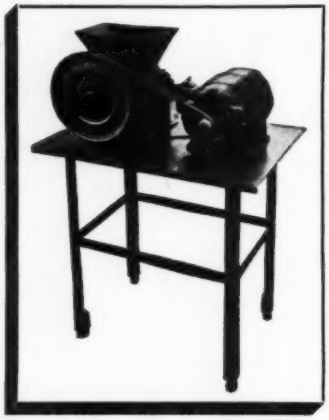


RANDALL REVOLVING OVEN

Right: The Model No. 64-G Randall Standard Revolving Oven has long been a favorite with meat packers. These ovens are doing yeoman service today Standard size capacity 64–6 lb. pans; 8 shelves (38"x9½"); complete with drip pans. Two galvanized covers for gears included. Floor space required: 72"x44". (Special sizes to order.)

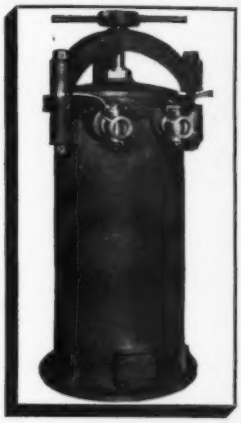
RANDALL HEAD CHEESE CUTTER

The Randall Motor Driven Head Cheese Cutter is standard with leading meat processors. Powered by ¾ or 1 H.P. motor. Cutter has 19 knives cutting against an aluminum drum. . . . Easily cleaned. . . . Excellent for cutting cooked hearts, livers, etc.



RANDALL STUFFER

Another Randall aid to increased production is the Randall Air Stuffer shown at right. Made in 100 lb. to 500 lb. sizes. Fully guaranteed. In use in leading packing plants everywhere.



RANDALL SCRAPPLE KETTLE

Shown at left is the original Scrapple Kettle with Stirring Apparatus. One size only, 125 gallon capacity. Can also be furnished for pulley drive. Another very widely used and much praised Randall favorite.

BUY RANDALL QUALITY

at lower cost . . . enjoy it longer!

Greater production, lower cost, improved quality, long service, whatever you seek when you buy new equipment—You'll find them all in the BIG FIVE by RANDALL. The way to MAKE THE MOST is to produce MORE for LESS with RANDALL equipment.

R. T. RANDALL & CO.

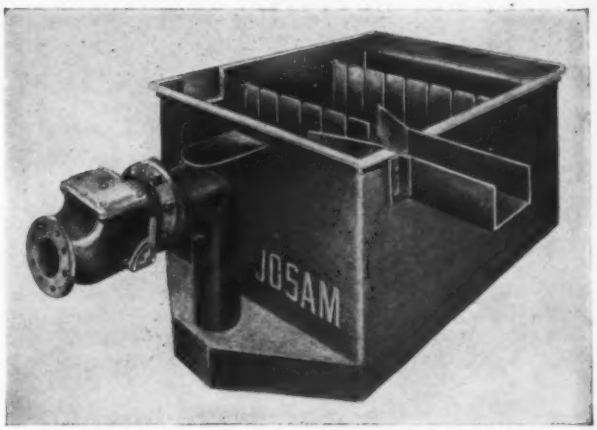
Your Headquarters for Sausage Machinery and Equipment since 1883

331-333 NORTH SECOND STREET
PHILADELPHIA 6, PENNSYLVANIA

Josam GREASE INTERCEPTOR for PACKING HOUSES

Designed for packing houses, abattoirs, rendering plants, etc., for installation in a pit easily accessible for observation and regular periodic skimming and immediately adjacent to a trench or to a storage vat or tank for holding the skimmed grease.

Constructed of all steel, embodying the main features of the regular Josam Cascade Grease Interceptor, with cascade bottom, solids evacuating channel and visible double wall trap seal. Series "PH" is not fitted with a cover, but is regularly furnished with a Flow Control, a Skimming Trough and a Skimming Valve for manual use. Skimming Valve permits operators to adjust the flow level to permit skimming of grease while interceptor remains in operation. Pressure stabilizing chamber to compensate for drainage from higher floors, furnished at additional cost.



Regularly finished with heavy lacquer coating, but can be finished with acid resisting coating at additional cost.

Flanged inlet and outlet connections. Sizes up to 500 GPM, but can be furnished for any capacity.

The AUTHORITY ON GREASE INTERCEPTION

FOR INDUSTRIAL AND COMMERCIAL INSTALLATIONS

There is a Josam Cascade Grease Interceptor—made of cast iron or steel—which guarantees efficiency of 90% or more, for all types of installations. Grease is removed from waste water before it clogs drain lines.

The Josam Manual "A" on "Grease Interception" gives you just about everything you need to know about this vital subject. Includes "Selection Chart" and "Selection Formula" for every type of installation. Tells about flow rates and their control. Complete with installation details. You'll want a copy—so send your request today!

ENGINEERING SERVICE

For special Commercial Installations or for Industrial Application, request Josam Data Sheet, which, when filled in with information applying to your particular needs, should be mailed to Josam Mfg. Co., Engineering Department, Michigan City, Indiana. Recommendations furnished without obligation.

Josam PRODUCTS STANDARD OF AMERICA

JOSAM MANUFACTURING COMPANY

Founded 1914

General Offices, 318 Ferguson Bldg., Cleveland, Ohio • Plant, Michigan City, Indiana

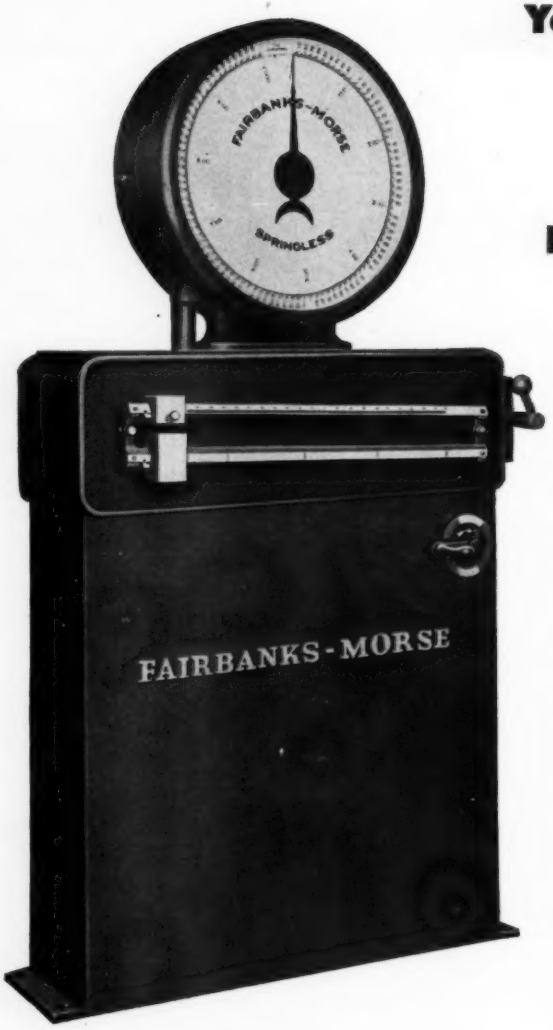
Representatives in all Principal Cities

JOSAM - PACIFIC CO., 765 Folsom Street, San Francisco, California — *West Coast Distributors*

EMPIRE BRASS COMPANY, LTD., London, Ontario, — *Canadian Distributors*

THERE ARE NO SUBSTITUTES FOR JOSAM PRODUCTS

Accurate Today and for Years to Come



FAIRBANKS-MORSE SCALES

It is not remarkable that Fairbanks-Morse Scales give enduringly accurate weighing service when you realize:

. . . that only materials of highest quality go into their manufacture—from their sturdy frames to their most minute working parts.

. . . that only skilled workmen are used to assemble them.

. . . that constant research is going on to make these scales even finer.

. . . that they have a heritage of 117 years of precision scale engineering.

Fairbanks-Morse Scales will serve you with accuracy—today and for years to come. Fairbanks, Morse & Co., Chicago 5, Illinois.

Fairbanks-Morse

A name worth remembering

Diesel Locomotives
Diesel Engines
Generators • Motors
Pumps • Scales
Magnetos • Stokers
Railroad Motor Cars
and Standpipes
Farm Equipment

What's the best system for picking horses?

Frankly, we don't know of any. To pick the winning horse, you've just got to be lucky.

But it's different with brokers

to handle your offerings—and your inquiries. *There is a sure system for picking the best.* It's this . . . CHECK THE BROKER'S STAFF—are they capable, experienced, everlastingly persistent? CHECK PERFORMANCE for others in the meat industry.

Similar check-ups have brought us some of our best accounts.

KEYSTONE BROKERAGE COMPANY

Wire, phone or teletype us with your inquiries and offerings

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PLAIN • PRINTED • SPECIAL TREATED

SPECIAL

NO. 101 WHITE OILED
Wrappers for Fresh Pork

202 M. P.
Liners for Poultry Boxes

WHITE EAGLE
Wrappers for Fresh Pork Poultry

GOLD STANDARD CRINKLED
Wrappers for Cooked Hams Poultry Smoked Meats

PROSPERITY
Wrappers for Fresh Pork Poultry Poultry Head Wraps

D-O-K WRAPPING
Wrappers, Box Liners, and Head Wraps for Poultry
Between layer sheets for Franks in Cartons
Wrappers for Fresh Pork Smoked Meat
Conveyor sheets in Sliced Bacon Dept.

WHALEHIDE
Wrappers for Cooked Ham Fresh Pork Smoked Meats
Wrappers (waxed) for Green Hams and Bellies for freezing
Covers for Slack Barrels
Liners (crinkled) for Slack Barrels of Pork and Beef Trimmings

D-O-K WAXED
Wrappers for Green Hams and Bellies Boneless Beef and Pork for the freezer
Liners for Boxes of Boneless Beef and Pork, fresh and frozen
Liners for Boxes of Fresh Pork and Beef Cuts, Livers, Hearts, etc., fresh and frozen
Wrappers, Box Liners, and Head Wraps for Poultry
Liners for Sausage Cartons

PRINT-O-HAM
Wrappers for Cooked Ham Smoked Meats

MARKET PAPER
Wrappers for Fores Hinds Primal Beef Cuts Smoked Meats
Wrappers, Box Liners, and Head Wraps for Poultry

GENUINE VEGETABLE PARCHMENT

REGULAR
Wrappers for Baked Loaves Cooked Ham Fresh Pork Poultry Sausage Sliced Bacon Smoked Meats
Liners for Luncheon Meat Tins Sliced Bacon Tins

CRINKLED
Liners for Cooked Ham Retainers
Covers for Slack Barrels
Wrappers for Tamales (Waxed) Fores Hinds Primal Beef Cuts

LARD LINER
Liners for Side Opening Lard Cartons Export Lard Boxes
Bags for End Opening Lard Cartons Export Lard Boxes

WAXED
Wrappers for Bulk Pork Sausage Pork Cuts for freezing
Liners for Army Poultry Boxes

GREASEPROOF

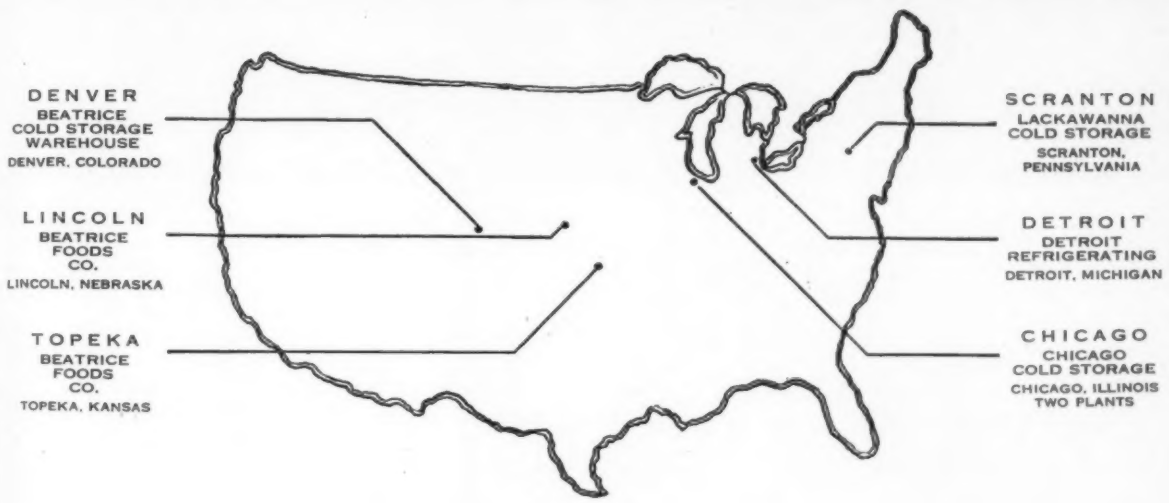
REGULAR
Wrappers for Baked Loaves Cooked Ham Sausage Sliced Bacon Smoked Meats

LARD LINER
Liners for Side Opening Lard Cartons Export Lard Boxes
Bags for End Opening Lard Cartons Export Lard Boxes

KALAMAZOO VEGETABLE PARCHMENT COMPANY
PARCHMENT • KALAMAZOO 99 • MICHIGAN
BRANCH PLANTS AT HOUSTON, TEXAS, AND PHILADELPHIA, PENNSYLVANIA

COLD STORAGE *Affiliated Refrigerated Warehouses* FOR

MEAT • CHEESE • BUTTER • EGGS • POULTRY • FROZEN FOODS



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With our modern and complete storage facilities and over forty years' experience in the cold storage business—you are assured of the most dependable and efficient handling of your commodities.

Proper Storage Facilities for all types of foods

The location of our plants in the important market areas gives you a definite sales advantage.

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INCORPORATED
910 Market Street, Wilmington 99, Del.

*Reg. U. S. Pat. Off. by Hercules Powder Company

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Portable "ALL PURPOSE" *Automatic*

TY SAUSAGE LINKER

Man Hour and Space Saving
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Uniformity of Size
Use of Unskilled Operators
Just Connect With Light Socket
Capacity of 114 Links Per Minute
Any Length, 3½" to 6¼"
Any Diameter up to 35 mm.

SINCE 1939

Length: 36"
Width: 20"
Height: 31"
Weight: 210 lbs.

Over 1800 Ty Linkers in Use!

LINKER MACHINES, INC.

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Not only has the Color of Ham ... but Tastes like ham!

- QUICK ACTION PICKLE
- FREEZE-EM PICKLE
- BULL-MEAT-BRAND FLOUR
- ZANZIBAR-BRAND CASING COLORS AND SEASONINGS FOR EVERY TYPE OF SAUSAGE

★ It's easy to turn pork red. But it's something else again to produce the rich, savory, flavorful TASTE of a cured ham. And it's REALLY something to do it quickly.

Heller METHODS, using Heller curing ingredients, are famous for giving you all three:—Tempting, appetizing color that lasts . . . real, old-fashioned FLAVOR . . . and modern, efficient speed in your curing cellar!

(The methods of using the Heller Q.A. process, for example, are covered by U. S. patents 1812614, 1359376, and 1633362.)

B. Heller & Company

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Suppliers of Fine Ingredients for Packers Since 1893

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National Stock Yards

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ONE OF THE NATION'S LARGEST MARKETS IN TOTAL RECEIPTS

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Exceptionally Wide Selection of Native and Western Beeves

CALVES

One of the Largest Calf Markets in the U. S. Desirable Weights, Top Quality

SHEEP

Our Native and Western Lambs Have Proven Most Satisfactory to the Trade.

HOGS

Desirable Weights and Quality to Meet Your Specific Needs.

LOCATION . . . advantageously located at the front door of the corn belt, at the gateway from the west to the east.

RAILROAD SERVICE . . . frequently scheduled runs to Chicago, Detroit, Buffalo, Cleveland and Pittsburgh *without feeding enroute*! Fast, dependable trains radiate out of St. Louis in every direction . . . speedy service to the Pacific Coast . . . single feed shipments to the south and southeast.

ORDER BUYERS . . . registered with the government and bonded . . . all are skilled order buyers experienced in purchasing all classes of livestock.

GOVERNMENT SUPERVISED . . . The St. Louis National Stock Yards is under the U. S. Packers and Stock Yards Act. All buying and selling is under direct supervision of governmental agencies, with high ethical trading practices in effect. All scales regularly tested under government supervision. According to government figures, this market shows a low percentage of losses due to condemned stock.

You'll profit by buying at this convenient market. Come in yourself or place your orders with one of our many order buyers.

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SMOKED MEATS
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QUALITY
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CANNED MEATS
SAUSAGE PRODUCTS
Tobin PACKING CO., INC.
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"COOKED"
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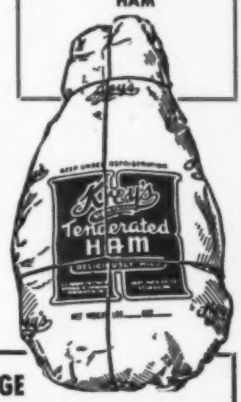

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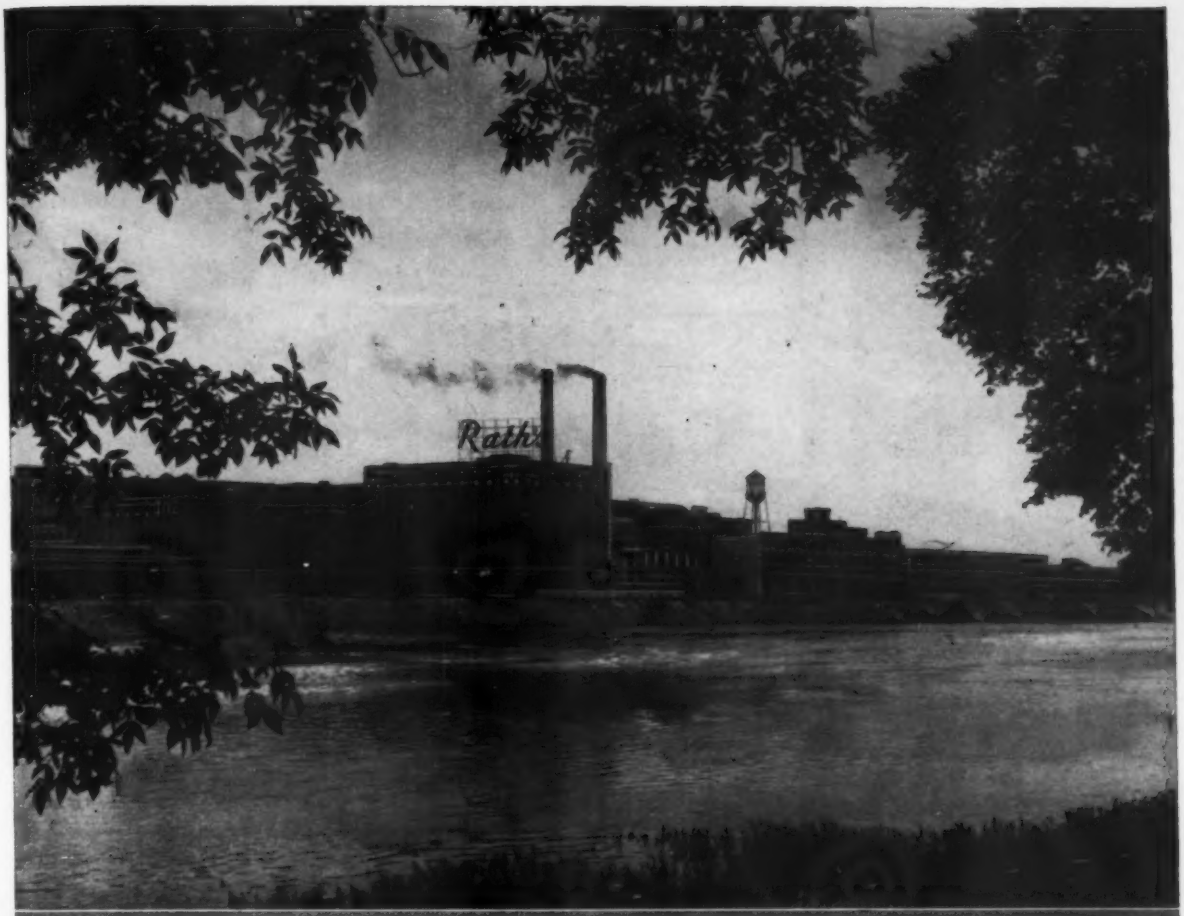

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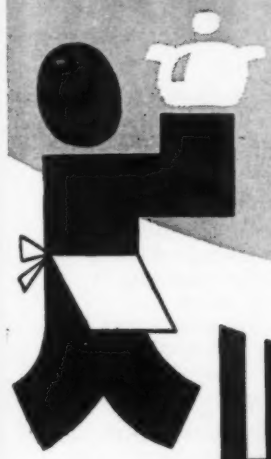

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BEEF · VEAL · LAMB
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in name... high grade in fact!

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ORIGINAL
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For over 35 years these famous brands, which identify the products of the J. S. Hoffman Company, have earned and kept the respect and good-will of the trade and public alike. They are recognized as representing the highest quality and flavor.

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Inquiries respectfully solicited

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CHICAGO • NEW YORK

EASTER BRAND

Meat Food Products

U. S. INSPECTED

FAMOUS SINCE 1886

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Produced by

THE DANAHY PACKING CO.

BUFFALO • NEW YORK

This is the Year of

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120th Anniversary

● In the years ahead, as in years past, John Morrell & Co. will continue to place quality above quantity... to value responsibility as much as reward ... to remember that only through profit for all can progress continue.

● **Morrell Pride Meats**

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RELIABLE

SINCE 1845 — KINGAN'S RELIABLE FOR MORE THAN 100 YEARS

FINE FRESH MEATS

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HAM BACON SAUSAGE

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PREPARED MEATS
IN TIN AND GLASS

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General Offices: INDIANAPOLIS, IND.

PURVEYORS OF FINE MEATS SINCE 1845

CUDAHY'S

Selected SHEEP CASINGS *are...*

DOUBLE TESTED!

TESTED FOR UNIFORM STRENGTH
to give you less breakage—lower costs

TESTED FOR UNIFORM SIZE
to give you finer appearance—more sales

Prime quality is yours when you order Cudahy's Selected Sheep Casings. Because they are put through rigid tests.

Lower Costs—More Sales

ALL Cudahy Casings are tested for uniform *strength*. This means that your breakage is greatly reduced—with resulting lower stuffing costs. And ALL Cudahy Casings are tested for uniform *size*. They are graded to a fraction of an inch by millimetric selection. This double uniformity makes well-filled, smooth, fine-looking sausage that sells so well.

They're "Naturally" Better

Sausages made with these natural casings have a plump, appetizing appearance. And they have an evenly smoked flavor and sealed-in juicy goodness that can't be imitated.

Over 79 Different Sizes

Whatever type of sausage you make, Cudahy has the beef, pork, or sheep casing you need.

Try Cudahy's for Fast Service!

Cudahy's many branches can quickly fill your orders from stocks on hand. Talk to our Casing Sales Experts for helpful advice—or write today!

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PRODUCERS AND IMPORTERS OF SHEEP CASINGS

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CANNED MEATS

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FINE PORK SAUSAGE

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It's
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Ready-To-Eat Hams
Sugar Cured Bacon
Prepared Loaves
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since 1891

QUALITY Gobel's FIRST
PURE MEAT FOOD PRODUCTS

ADOLF GOBEL, INC.
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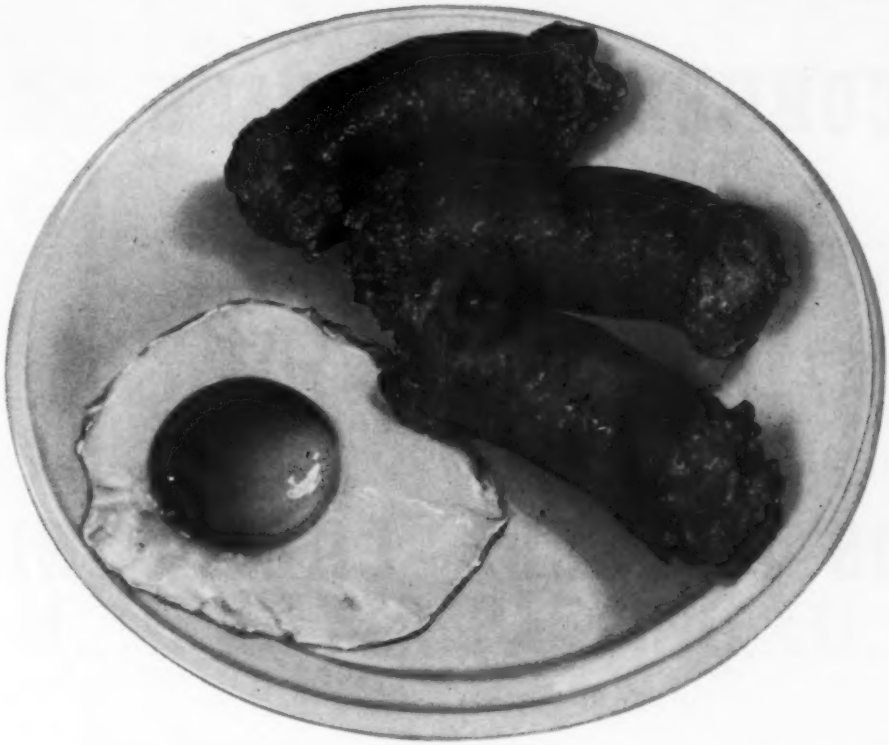

FINE SAUSAGE *deserves* FINE CASINGS

Tempting, appetizing appearance—better protection—absolute uniformity—longer lasting freshness . . . these are characteristics you can be sure of always in sausages stuffed in Wilson's Natural Casings. For the best all 'round finished product, use Wilson's Natural Casings.

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In *every* way sausage is *best* in

WILSON'S NATURAL CASINGS

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MEAT PACKERS

BEEF - VEAL - LAMB

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"Partridge"

HIGHEST QUALITY SINCE 1876

HAM—BACON—LARD

SAUSAGE

THE H. H. MEYER PACKING CO.

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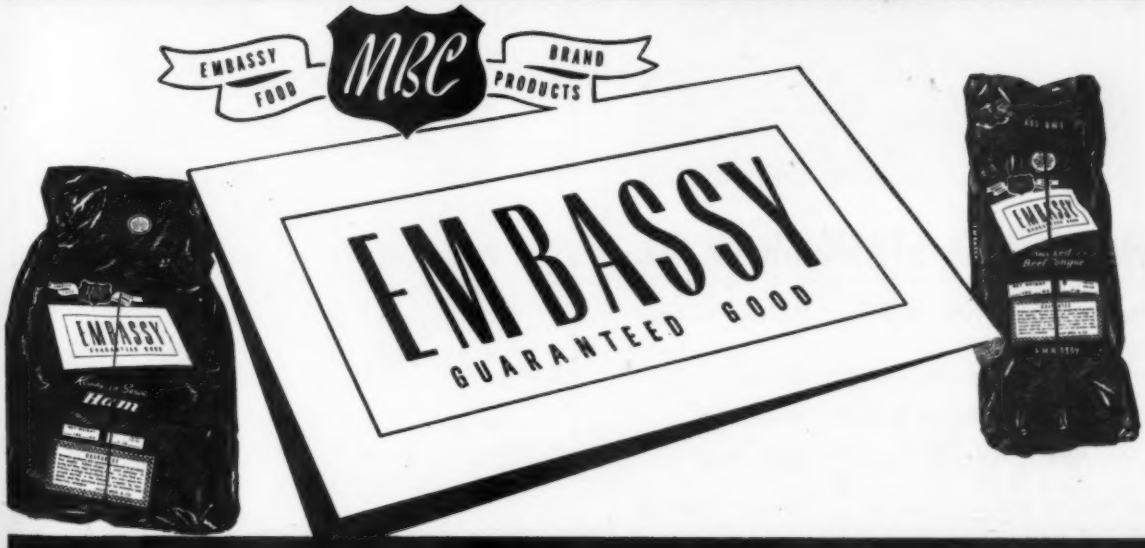
The "Red Packaged Line" That's Guaranteed Good



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MILLAR BROS. & CO. PHILADELPHIA SINCE 1865

WE'LL SOON BE "AT HOME" IN THE

South's Most Modern Packing Plant

THE NEW HOME OF ABRAHAM BROS. PACKING COMPANY, MEMPHIS, TENNESSEE

The new Abraham Brothers' Packing Plant will be completed late this fall. It will be the most modern packing plant in the entire South, utilizing the most advanced equipment and facilities.

Our new home will enable us to even better carry on the tradition of Abros Quality Meats—which have been preferred for more than 38 years.

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Packers of the Famous Greenfield and Sunnybrook Brands, Tendermild Hams, Bacon, Sausage and Lard

ALL PRODUCTS PRODUCED UNDER U. S. GOVERNMENT INSPECTION

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Serving the Meat Industry for Eighty-Eight Years

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Deerfoot Farm Sausage

DEERFOOT FARMS READY-TO-EAT HAMS

A Complete Line of Smoked Meats and Ready-to-Serve Meat Products

SINCE 1847

Deerfoot Farms Company

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Madison Home of *Yellow Band* Meats

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Madison, Wisconsin — *Fine Meats Since 1883* — Chicago, Illinois

Located in the *"Great Valley"*
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FINE SAUSAGE · SCRAPPLE · HAMS

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RED SEAL Prepared Meats in Tin and Glass

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The Best You've Ever Tasted

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HATELY BRAND PURE REFINED LARD

Packaged in All Available Types Containers for the Domestic and Export Trade

SHIPPERS OF STRAIGHT OR MIXED CARS AND TRUCKS

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PLANT: 37TH AND IRON STREETS • *Since 1873 in Chicago* • GENERAL OFFICES: 1738 BOARD OF TRADE BLDG.

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Straight or Mixed Cars

BEEF • VEAL • LAMB • PORK

AND **OFFAL**

Let Us Hear from You!

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Established 25 Years

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For Tomorrow's Business

"CUDAHY OF CUDAHY"

WISCONSIN

1888 **Peacock** 1947

Meat Products

BEEF • PORK
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DRIED BEEF
SHORTENING

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HAMS • BACON
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EAST TENNESSEE
SERVING THE SOUTH
SINCE 1896
PACKING COMPANY

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In the Heart of the Tennessee Valley

RECOGNIZED NATIONALLY for Quality

Magnolia WIENERS

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Magnolia PURE PORK SAUSAGE

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EMMART PACKING CO.
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Manufacturers of

"MARVEL TASTE"

Ready-to-Serve Meat Products

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QUALITY MEAT PRODUCTS
Gold Medal
PACKING CORPORATION
UTICA, N.Y.

Dependably

HIGH QUALITY SAUSAGE and PORK PRODUCTS

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GOLD MEDAL PACKING CORP.

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DRESSED BEEF • BONELESS MEATS
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Question—

WHAT MAKES HORMEL GOOD FOOD GOOD?

Answer—

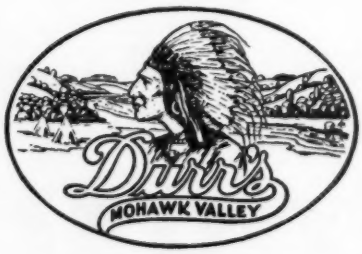
Geo. A. Hormel & Co.—located in the heart of a rich farming territory famous for highest grade livestock—is the favored market for these superior animals. Skilled operators in the plant, working with the choicest that nature produces, achieve the aim of the founder...to make the Hormel name synonymous with the very best in meat products.

HORMEL
GOOD FOOD

C. A. DURR PACKING CO., INC.

UTICA, N. Y.

TRADE MARK



BRAND

QUALITY MEATS

HAMS - BACON - FRANKFURTS
LARD - DAISIES - SAUSAGES

• FIVE FINGERS •

The Amalgamated Meat Cutters and Butcher Workmen of North America extend greetings to the Convention of the American Meat Institute. You are the men who direct production in packing plants from coast to coast. The membership of our International Union in those plants are the producers.

Stop for a moment and glance down at your hand. On it you will see FIVE FINGERS. What have five fingers to do with your Convention, or with you representing management, or with we representing workers? Bear with us for a moment.

If we sow BAD SEED, we harvest BAD CROPS. Naturally we do not like the Taft-Hartley Act. We feel, however, it may develop to be the yardstick with which will be determined whether or not those who represent labor have in the past sown GOOD or BAD SEED. We know that employers can, if they so desire, under the new law make it tough on the one who speaks for the workers, if they determine to do so.

To conclude that man to man, an employer cannot think highly of a labor representative is asinine. It has been our feeling for a good many years that strong labor unions have never been permanently developed ON POWER ALONE. Good unions and good companies ALWAYS HAVE and ALWAYS WILL BE developed around PERSONALITIES. If the labor leader of the present has in the past been a labor leader who won the respect of the employer, because of his REASONING, COOPERATION and FRIENDLY UNDERSTANDING OF MANAGEMENT PROBLEMS, we confidently feel that these employers will be REASONABLE and COOPERATIVE in this new era of cramped organized labor activity.

There are hundreds of employers who for many years have socially called us by our first names and vice versa. Over the years we have had lunches, dinners, and sometimes an extra highball or two with these men. We exchanged stories and LAUGHED LIKE ORDINARY HUMAN BEINGS SHOULD DO. We do not feel that in doing this, we have made a bad investment on behalf of the sincere workers who are members of the union we represent.

On many occasions we have asked these employers to do us a personal favor from an organization standpoint. We remember now that they granted these favors on most occasions. These employers on the other hand occasionally requested us to do them a favor when they felt their toes were being stepped on a little too hard here and there. We always felt a little better when we could give a "Good guy" a lift, and we are human enough to feel that the employers we have in mind always felt a little better when they could give us a lift.

It is MEN who make up industry and MEN who make up the leadership of organized labor. MEN will, in any walk of life, remain MEN; and nine times out of ten, remain GENTLEMEN.

In the past few weeks we have been consolingly reassured by scores of employers that they intend to in the future as in the past go along with our organization in a FRIENDLY, COOPERATIVE WAY. If we had not shown a friendly, cooperative attitude prior to the passage of the Taft-Hartley Law, well, maybe we should not feel too badly if those same employers now would compel us to DEAL WITH THEM THE HARD WAY. A FEW of us in BOTH groups might not have been "ON THE BEAM." If we have used our REASON in a mutually JUST MANNER, DID NOT INJECT FEAR and have been COOPERATIVE in our relationship with each other, then under the Taft-Hartley Act, we ought to be able to make the grade.

The next time you come in contact with a representative of organized labor, SHAKE HIS HAND. You will notice that on it will be FIVE FINGERS JUST LIKE YOURS. As a general rule, human beings are pretty much the same. FAIR PLAY—THAT'S ALL THE WORLD HAS EVER NEEDED.

AMALGAMATED MEAT CUTTERS AND BUTCHER WORKMEN OF NORTH AMERICA

201 NORTH WELLS STREET • CHICAGO, ILLINOIS

EARL W. JIMERSON, General President • PATRICK E. GORMAN, General Secretary-Treasurer

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for dependable low-cost service .... Use LINK-BELT Chains and Sprockets

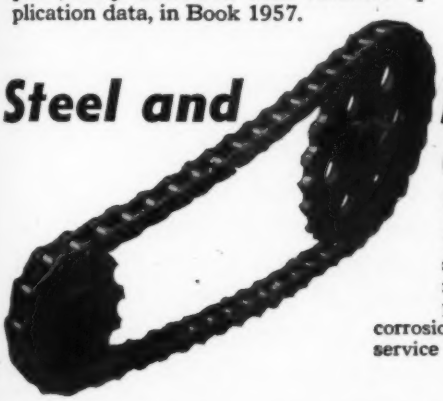
Silent Chain Drive

The ultimate in high-speed drives, Link-Belt Silverstreak silent chain combines long-life, highest efficiency and lowest over-all cost. It runs slack on short centers, with least bearing pressure, yet slip is impossible. Unaffected by temperature, oil or moisture; can not deteriorate during idle periods. Data Book 125 is packed with helpful facts and application suggestions—Send for your copy.

Roller Chain Drive...

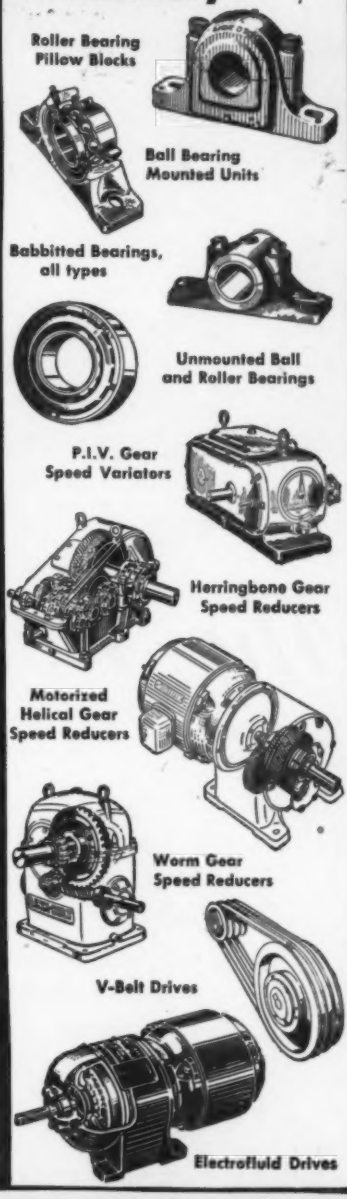
Link-Belt Silverlink roller chain is applicable to the widest range of power transmission problems. Great Strength in relation to weight, stamina to withstand shock loads, smooth, positive and flexible operation are outstanding advantages of this versatile medium. Motion in either direction, without slip or creep, can be given any number of shafts. Single or multiple widths, from 3/8 inch to 2 inch pitch, fully described with valuable application data, in Book 1957.

Steel and Malleable Chain Drives



Supply the mechanical advantages of chain power transmission to heaviest-duty, slow and medium speed applications. Link-Belt steel, malleable iron and Promal chains provide the strength, stamina and corrosion resistance to meet the severest service conditions. Send for Book 1994.

Most Complete Line of Power Transmission Machinery



LINK-BELT COMPANY

THE LEADING MANUFACTURER OF CONVEYING AND MECHANICAL POWER TRANSMISSION MACHINERY

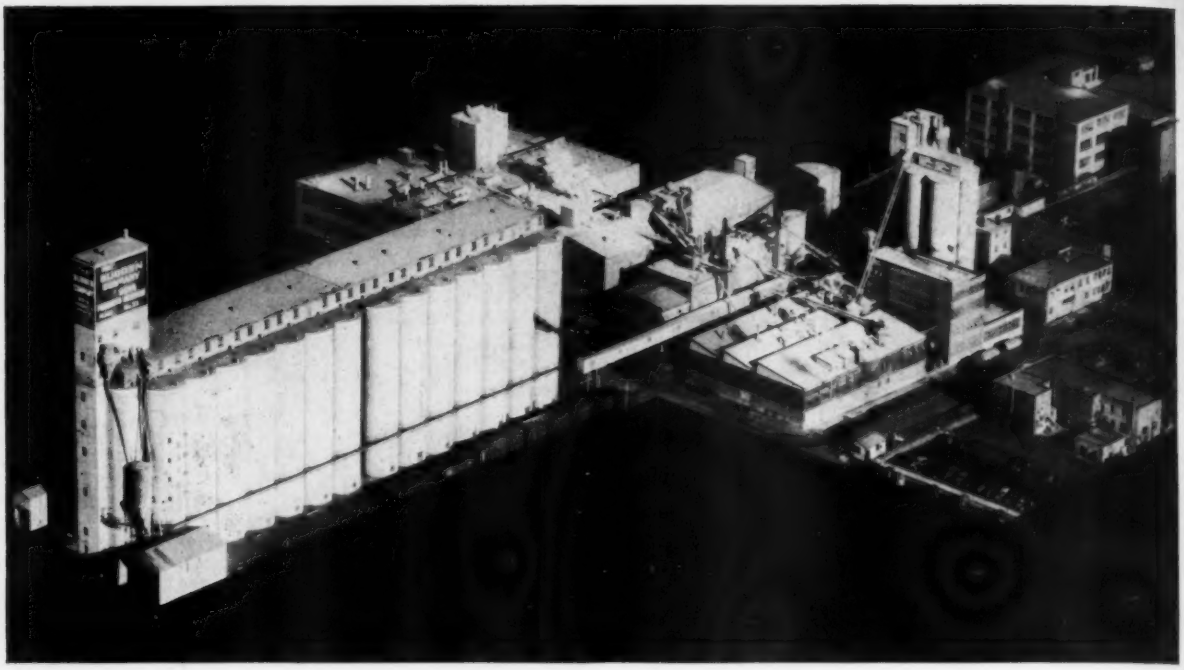
Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Dallas 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

10,699 D

A Link-Belt power transmission engineer has no one's ax to grind—except his customer's. Not confined by a limited line—he can recommend the type of speed reducer—the type of bearing—the type of chain drive—the exact power transmission units best suited to his customer's needs. Link-Belt engineering advice on your power transmission problems is completely unbiased. There is no reason for it to be otherwise.

LINK-BELT

Power Transmission Machinery



The Home of:

DIAMOND G BRAND

QUALITY INGREDIENTS FOR THE MEAT PACKING INDUSTRY

Here modern production facilities provide the meat packing industry with the finest of soya binders for sausage, meat loaves, chili con carne, scrapple, canned meat products and sausage specialties. Scientific laboratory research has given the industry three *new* and *different* "profit-makers"... "SOYA-BITS", a bland, light color binder that is practically fat-free... "SOYALOSE", a rich in protein, low in fat content soya binder ... "SORBO", an efficient, economical and uniform meat loaf ingredient. Write us of your particular problems. *Working samples on request!*

THE GLIDDEN COMPANY

Soya Products Division

5165 WEST MOFFAT STREET • CHICAGO 39, ILLINOIS

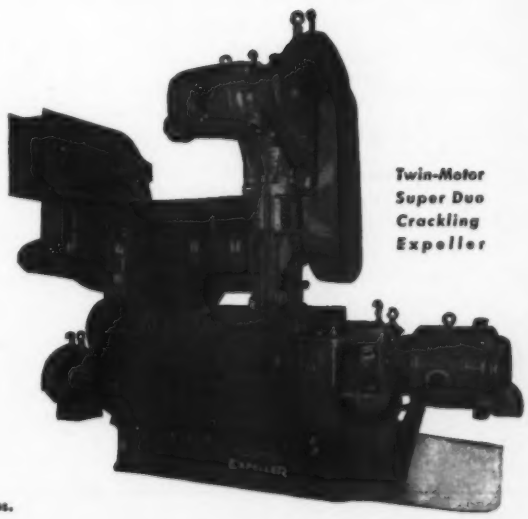
"There's a hand in your pocket"

● Using inefficient equipment for removing grease from your cracklings is opening your pocket for a real loss of cash. When protein content is low (as when fat content is high) you don't just get a poor price for the grease—you actually give it away! Yes, give it away, for when you sell on per unit protein basis, you don't get a cent for the grease. That's why the Expeller*, Anderson's continuous screw press, is preferred in most rendering departments. Expellers are tops in efficient pressing—they reduce grease content of cracklings down to as low as 6%. That means you sell grease at a long price instead of giving it away.

Anderson Crackling Expellers are made in three sizes, for a capacity range of 400 lbs. pressed cracklings per hour to 1500 lbs. pressed cracklings per hour.

Learn more about efficient, money-making Expellers—Write today and ask for an Anderson Engineer to call with full details.

THE V. D. ANDERSON COMPANY
1965 West 96th Street • Cleveland 2, Ohio



Twin-Motor Super Duo Crackling Expeller

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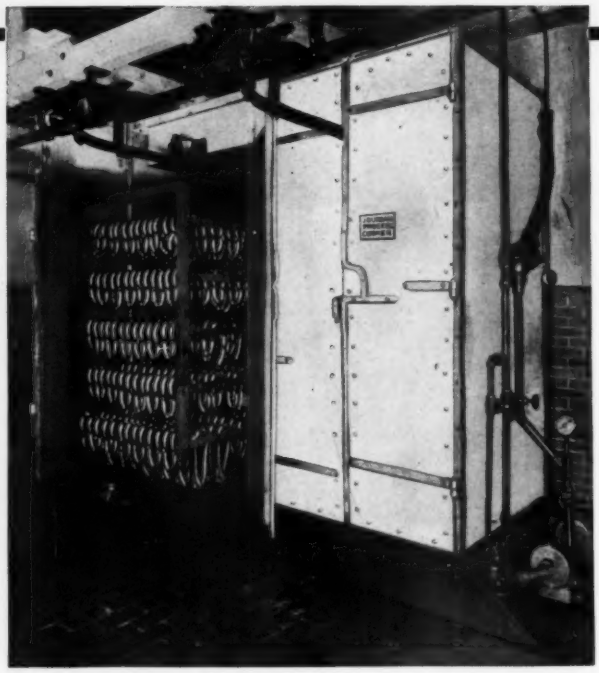
Only ANDERSON makes EXPELLERS

JOURDAN PROCESS COOKER

4
TYPES OF CONSTRUCTION

1. The *regular* Jourdan Process Cooker that has met with nation-wide acceptance
2. New *galvanized* and Stainless Steel Trim Jourdan Cooker
3. Semi-Stainless Steel *construction* Model
4. Solid Stainless Steel Jourdan Cooker



7
OUTSTANDING ADVANTAGES

1. Cooks full cage of sausage right on the rail. No handling of product.
2. Saves costly labor
3. Cooks faster and better
4. Large savings in shrink
5. No burst, broken or tangled sausage
6. Applies color as sausage cooks
7. Assures a cleaner, improved product

Manufactured under patents of William Jourdan, Inventor.

HOTWATER COOKER

The Jourdan Process Cooker cooks with hot water with or without color. Simply roll in the loaded cages or trucks just as they come from the smokehouse. And presto!... the job is done. A perfectly cooked, more appealing product is the result.

VAPOR COOKING

The Jourdan *Vapor* Cooker is also available, specially designed and equipped with piping and fittings to vaporize steam. The Jourdan *Vapor* Cooker does a far better job of cooking than the old fashioned steam box.

EASY TO OPERATE

Every Jourdan Cooker comes fully equipped with electric motor, centrifugal pump, thermostatically controlled regulator and easy-to-read dial indicating thermometer. The Jourdan is famous for its ease of operation.

STANDARD OR SPECIAL MODELS

The Jourdan Process Cooker is built in three standard models ... the single cabinet, the double cabinet and the twin cabinet. All three admit cages up to 44" side width by 44" edge width with a total height clearance of 7'6". Special sizes may be obtained for almost any condition under which cooking is accomplished. A dimension chart is available upon request so that the necessary information may be submitted for recommended application. Machines are shipped knocked down ... are quickly and easily assembled as the several units are clearly marked. Operation is simple and fool-proof. *Investigate JOURDAN today . . . write for details.*

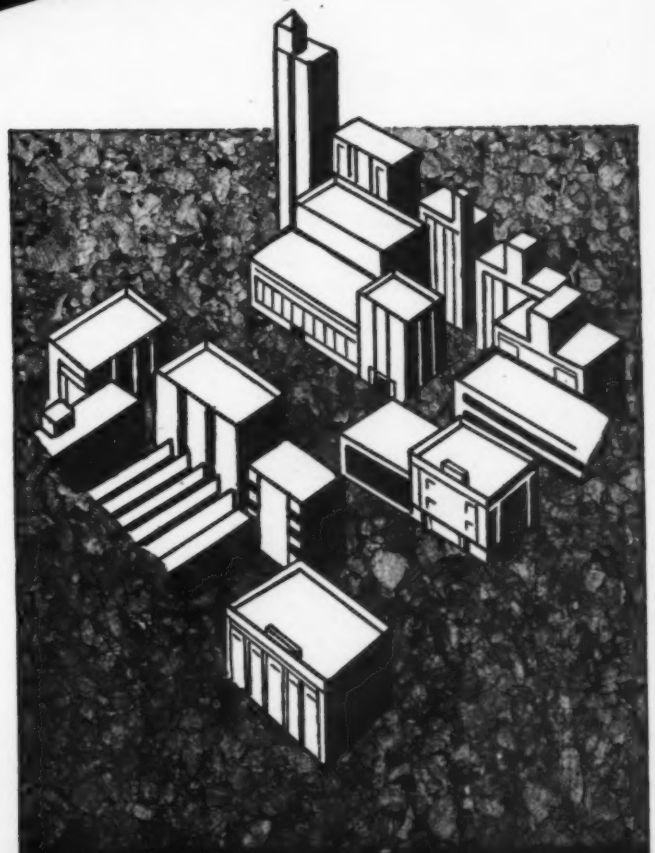
JOURDAN PROCESS COOKER CO.

814-832 WEST CULLERTON ST. (20th STREET) Ph. CANAL 3846 CHICAGO 8, ILL.

UNITED FOLLOWS THROUGH FROM RAW CORK TO FINISHED INSTALLATION

Whether for new construction, modernization or rearrangement of cold storage facilities, UNITED does the job from start to finish. Architects, engineers and contractors in specifying UNITED's BB Cork Insulation can be assured of our cooperation in planning and designing. Thousands of installations during the past forty years have proved that UNITED'S corkboard affords all the inherent characteristics vital to satisfactory results in efficient service and structural dependability. And today, as in the past, UNITED keeps apace with all advanced cold storage construction from manufacture of the exclusive Block Baked cork process in one of the most modern insulation plants through to scientific erection methods of finished installation.

UNITED'S B.B. BLOCK BAKED CORKBOARD



UNITED
CORK COMPANIES
KEARNY, NEW JERSEY
Manufacturers and Erectors of Cork Insulation

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Albany, N. Y.
Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Hartford, Conn.
Indianapolis, Ind.
Los Angeles, Calif.
Milwaukee, Wis.
New Orleans, La.
New York, N. Y.
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Pittsburgh, Pa.
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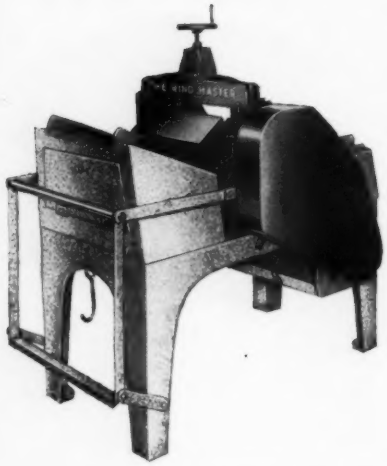
You've got to SPEND MONEY TO MAKE MONEY!



THE RIND-MASTER

THE BACON-MASTER

We've all heard that familiar phrase before and if ever there was truth to it, now must be that time. The constantly rising cost of doing business during these post-war years has caused management to seek better production methods and newer and more efficient machinery for increasing the output of labor—these objectives if successfully attained, being the only logical ones which could make possible the holding down of prices on the one hand and the granting of periodical wage increases to the labor barons on the other.

We aren't business analysts who can prescribe the cure for ailing business, but we do know that it is sometimes possible to accomplish the above objectives in one important—but often overlooked department—in a meat packing plant—the bacon department. As an example—are you sure that you are processing bacon in a manner that will insure the most profit on the operations for yourself? Many packers fail to make periodic checks on market conditions and simply take for granted that fresh pork skins are worth more than smoked ones whereas in reality, the reverse has been true for many months! So they continue to skin bellies green, thereby realizing less money for the gelatin skins than could be obtained for the smoked rinds and, in addition must automatically absorb a greater skinning loss and a greater smokehouse shrinkage on the bacon than would be the case if they had smoked with the skin on and had skinned the product *after* smoking. Only if one owns a gelatin plant to convert the skins, can one afford to skin bellies green.

By spending money for the purchase of a Dohm & Nelke RIND-MASTER Skinner, we guarantee that your labor cost of skinning smoked bacon will be reduced by 50 to 66⅔% of whatever it is now, for the RIND-MASTER is from 2 to 3 times faster than other make machines! Bacon yields too will be greater, because the usual wasteful and time-consuming hand-starting operation is eliminated.

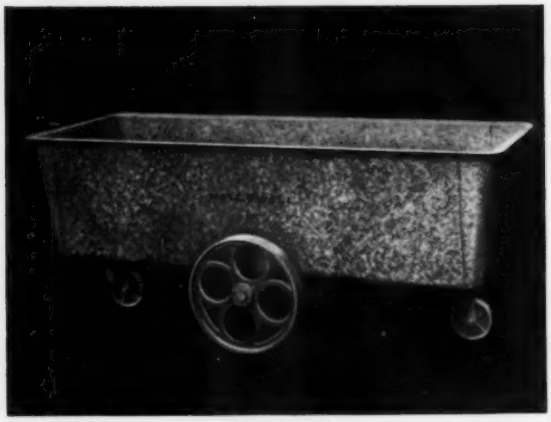
Do you know too that as much as two cents per pound more profit can also be realized on your bacon operations by installing a Dohm & Nelke BACON-MASTER Forming Machine, to shape each piece of bacon into a perfectly rectangular slab before slicing it, which eliminates the otherwise unavoidable accumulation of low priced end scraps. Forming bacon makes it far easier to obtain any specific number of slices per pound and it results in neater, more uniform and faster packaging of the finished product.

Both machines are inexpensive, considering what they do for their owners, and no firm is "too small" to be without either of them. We want to tell you more about RIND-MASTER Skinners and BACON-MASTER Formers and their time and money-saving performances, but unfortunately, space does not permit. Write for descriptive literature giving full details and prices.

DOHM & NELKE INC.
SERVING THE MEAT PACKING INDUSTRY
ARCHITECTS & MACHINERY & EQUIPMENT
ST. LOUIS, MO. U.S. OF A.

7700 E. RAILROAD AVE. *(Successors to Lou Menges & Associates)* **ST. LOUIS 15, MO.**

"Always a pleasure to serve you!"
THE
CASING HOUSE
BERTH. LEVI & CO., INC.
NEW YORK • CHICAGO
LONDON • BUENOS AIRES • WELLINGTON
For 66 years we have
taken a genuine
sincere pleasure in
serving the Meat
Packing Industry.
We shall ever strive
to merit your confidence.



Pat. applied for **Fig. 1053**

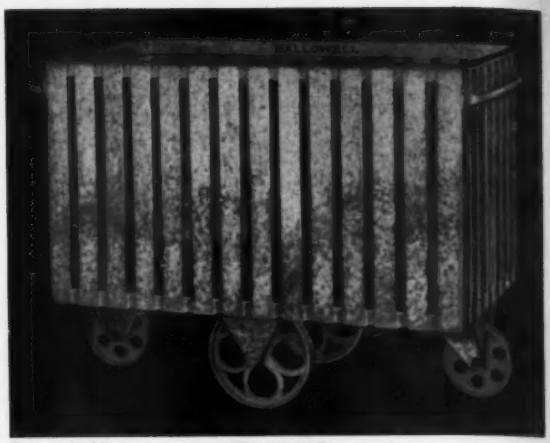
"Hallowell" Sausage-Meat Truck—Large Size

Pat. applied for **Fig. 1234**

"Hallowell" Cutting Room Truck

Pat. applied for **Fig. 1091**

"Hallowell" Meat Truck



Pat. applied for **Fig. 1208**

"Hallowell" Slatted Meat Truck

HALLOWELL

HOT DIPPED GALVANIZED STEEL

PACKING PLANT EQUIPMENT

built for long, hard usage, easy to keep clean . . .

and you profit through the use of "Hallowell" Steel Equipment . . . from the standpoint of sanitation alone. Worked out in harmony with the Bureau of Animal Industry, "Hallowell" Equipment has no porous surfaces or cracks to catch and stubbornly hold the refuse and rust . . . no unsanitary, hard-to-clean-out corners.

You also profit through welded steel joints which give full value for every dollar expended on "Hallowell" Equipment! It stands the gaff of hard service, abuse and careless handling.

Investigate "Hallowell" Packing Plant Equipment.

Send for details.

Over 44 Years In Business

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNA., BOX 550 • BRANCHES: BOSTON • CHICAGO • DETROIT • INDIANAPOLIS • ST. LOUIS • SAN FRANCISCO

The UNIT *that*
"REVOLUTIONIZES the Smoking Process"

Says Jean Hanache, well known Chemist

Delivers revolving washed smoke and distributes heat and smoke evenly throughout the smokehouses . . . may be connected to several smokehouses . . . saves smoking time . . . gives better tasting products . . . pays its own cost in a very short time. The Lipton Smoke Unit is successfully working in many of the best known packing houses throughout the country and its value is proved by numerous repeat orders.

Pat. No. 2246804 Other Pat. Pend.

LIPTON SMOKE UNIT No. 10 is equipped with an automatic sawdust feeder for increased efficiency. Operates at three different speeds, distributes sawdust and frees the operator for other duties.

NEW: THERMOSTATIC CONTROLLED GAS HEATER WHICH ELIMINATES DANGEROUS OPEN GAS FLAMES IN THE HOUSE, AND GIVES CIRCULATING HEAT.

★ What our customers say and why the Unit pays its cost in a very short time:

1. Elimination of fire hazard.
2. Sawdust bill cut in half.
3. No fuel cost—none used.
4. Delivered clean smoke at the rate of 500 cu. ft. per min.
5. Eliminated need for cleaning smokehouse walls.
6. Provided good circulation of smoke to all parts of house.
7. Permitted better temperature control and less shrinkage.
8. Saved materially on cleaning cages and trees, since no creosote was deposited on them.
9. Smoked products had better, more uniform color.
10. Eliminated streaking and spotting of product.

Write for details, prices and a new booklet or ask a representative to call.

MARTIN H. LIPTON CO., INC.

"The Lipton Smoke Unit"

32 TENTH AVENUE, NEW YORK 14, N. Y.

Chicago Office Representative:
RAYMOND J. SEIPP,
20 E. Delaware Place

Export Representative:
PAUL E. MOSS
10 Empire State Building
New York, 1, N. Y.

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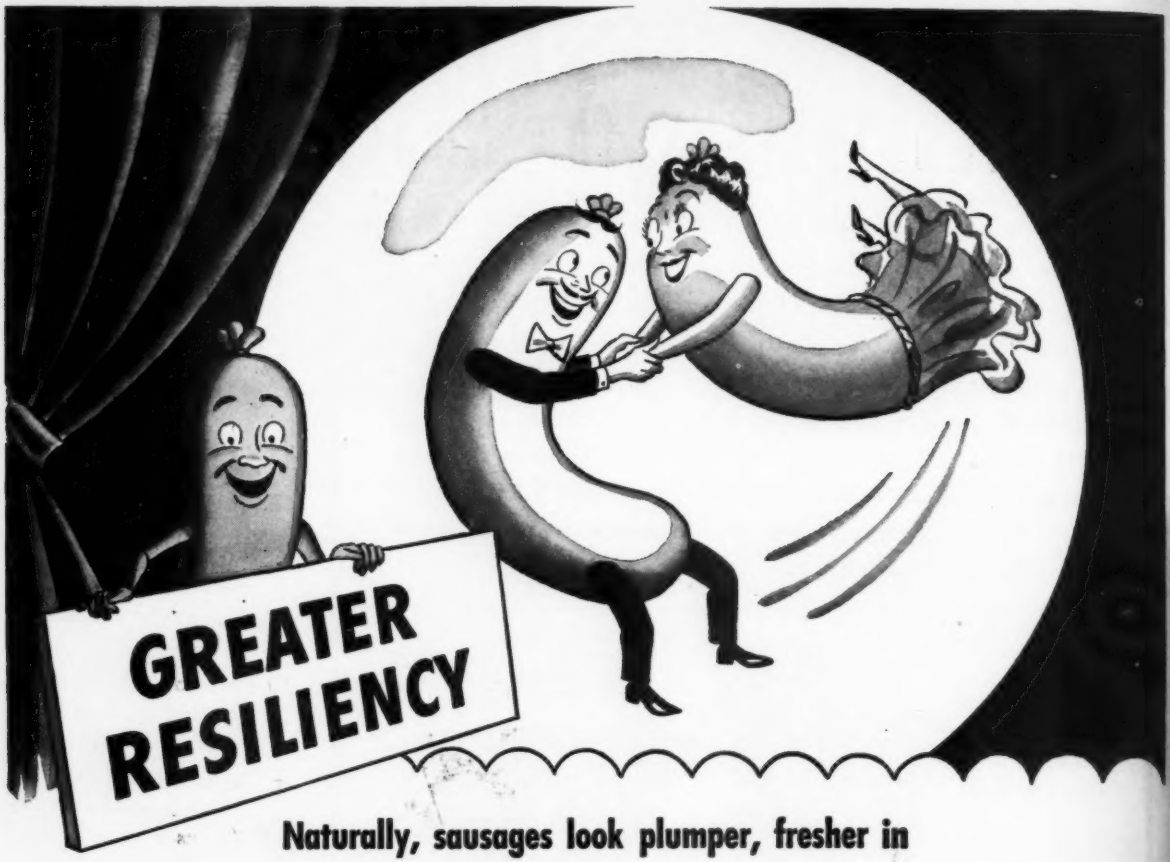


Naturally, sausages look plumper, fresher in

Armour Natural Casings

The greater resiliency of Armour Natural Casings keeps them clinging tightly to the meat—gives sausage the plump, well-filled, appetizing appearance that means a plus in sales-appeal.

Put your sausages in these fine natural casings for:

Appetizing Appearance *Inviting Plumpness*
Finest Smoked Flavor
Protected Freshness *Utmost Uniformity*

ARMOUR
AND COMPANY

THE NATIONAL PROVISIONER
VOL. 117, NO. 11 • SEPTEMBER 13, 1947

Unified Approach for Today's Problems

More than 2,000 packers from all parts of the United States, as well as representatives from a number of other countries, assembled in Chicago the first week in September for the American Meat Institute Convention. Sessions on all phases of industry activity—research, operations, livestock procurement, sales and merchandising—were well attended by Institute members and guests.

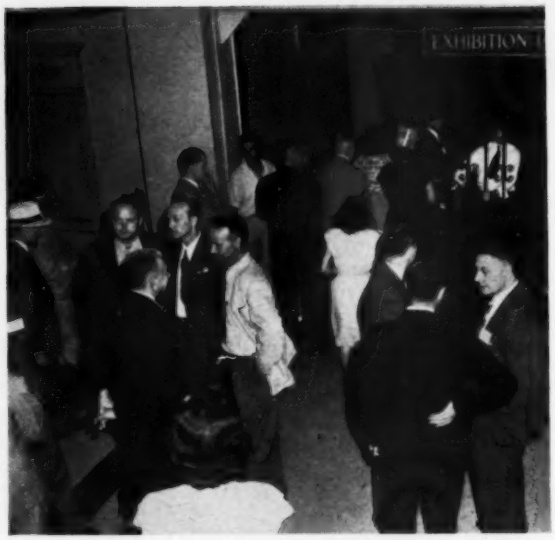
REALIZATION by the meat packing industry that developments in the postwar period make it imperative that business be alert and aggressive on an *industry-wide* basis was apparent at the forty-second annual meeting of the American Meat Institute, held at the Palmer House, Chicago, September 2, 3 and 4.

In an address which strongly urged teamwork and cooperative action on the part of the entire meat industry, AMI President Hardenbergh explained that the growing complexity of business intensifies the need for both increased research and improved public relations—research in order to keep industries abreast of progress and better public relations, with producers, employes and consumers, in order to be better understood and appreciated. These factors point clearly to the need for strong trade associations and to national associations, representing an entire industry, he said.

One of the many problems which demands the attention of the Institute and of individual companies, as outlined by John F. Krey, chairman of the board of directors—that of better relations with livestock producers—is extremely urgent because of the emergency that exists as a result of the corn crop failure. "We need to be teaming up with our farmer partners in this meat business, seeking ways to maintain livestock production as high as possible on a short corn ration," Krey told the assembled packers. He assured them that the industry is entirely capable of meeting the challenge of extending limited feed supplies for it has proved able to adjust quickly to many new problems which have confronted meat packers in the postwar period.

General of the Army Dwight

D. Eisenhower, Chief of Staff of the U. S. Army, addressing the annual dinner, frankly told industry members that the future of the world rests upon the extent of their cooperation in supplying needed food, as he warned that there has never been a time in history when our country faced graver problems than today. In helping to supply food to a starving world the industry should not feel that it is being completely charitable, Eisenhower explained, for "in supporting those nations that do want to live their own lives, and that have some concept of life under a Bill of Rights, we are also working for ourselves. For the moment the critical thing is food and clothing which are needed to get those people to that state of mind where they can think about their problems. The next step is to get them so organized and able to coalesce in their own regions that they can help themselves to the utmost."



Registration at the convention totaled 2,684, an all-time high. J. F. Krey, Krey Packing Co., St. Louis, was re-elected chairman of the board.

Significantly, for an organization which recognizes the vital role of science in business, the first general session was devoted to a discussion of results of recent research and their application to industry. One of the leading scientific writers in the country, speaking on "Research Unlimited," remarked that our knowledge of the universe in which we live is only preliminary, that most of nature still needs to be explored and that most research still lies in the future. All who think realize that the best is yet to come, Dr. Gerald N. Wendt said.

On the subject of the application of atomic energy to industry, Dr. T. R. Hogness assured his audience that there will be widespread uses for atomic energy for power purposes but stated that most scientists believe these benefits will be vastly outweighed by the indirect benefits that will arise from the use of "tracers" in research. With "tracers" it is possible to "see," with suitable instruments, the course of tracer molecules and atoms in the plant, in metal, in the animal body and in industrial processes.

All speakers on this session stressed the fact that industry must take the lead in supporting science, including "pure science," even when a practical application is not readily apparent. The American Meat Institute Foundation building now being constructed on the campus of the University of Chicago to house the Institute's research activities, was cited as "perhaps the most important activity the Institute has ever undertaken," in view of the fact that research findings are quite likely to make the difference between successful and unsuccessful operation of the industry in the future, as President Hardenbergh pointed out.

Another speaker expressed the hope that the program of research undertaken there will be directed to fundamental aspects which may find their application over a period of many years in the future, for "it would be a disastrous mistake if the enthusiasm for cooperative action in study of these problems by members of the industry should die out so that the project suffers neglect and does not continue to grow. Privately supported research projects offer the greatest safeguard against regimentation of science."

Dr. Newton of Swift & Company asserted that research is the greatest single factor in competition and that any industry or company which fails to make the greatest use of science is doomed to a second-rate position and to ultimate failure.

Recapitulating the theme that the possibilities for improving life are unlimited, the film "The New America," which was presented at the annual banquet by *Life* magazine, gave glimpses of a better America, in which not only freedom, but prosperity as well, can be enjoyed by all.

F. W. Specht, president of Armour and Company, discussed the possibilities of sales and merchandising in a world of tomorrow—a world in which there will be opinion polls, and many other tools, to enable manufacturers to know exactly what tomorrow's customer is like and exactly what she wants. The entire meat industry—producers, packers and retailers—can cooperate to insure that Mrs. Tomorrow spends a greater proportion of her income for meat, all leading toward a better, more prosperous and more highly regarded industry.

This optimistic outlook was reiterated by Dr. Sumner H. Slichter of Harvard university, who stated that at few times in the past has the long-run outlook for consumer purchasing power been more favorable than at present.

With regard to the prospective meat supply, R. J. Eggert, of the Institute's department of marketing, predicted meat consumption next year at 148 lbs. per capita—10 lbs. less than in 1947 but 10 lbs. more than the prewar average. Current per capita meat consumption is expected to be exceeded by 17 per cent in the last quarter of 1947, 11 per cent in the first quarter of next year, 2 per cent in the second quarter and 9 per cent in the fourth quarter, but consumption in the third quarter next year is expected to be 5 per cent less than the relatively low rate of consumption at the present time.

Session 1

TUESDAY, SEPTEMBER 2

TECHNICAL SESSION

"Research Unlimited"—Dr. Gerald N. Wendt, page 104.

"Application of Atomic Energy to Industry"—Dr. T. R. Hogness, page 110.

"What Scientific Research Should Mean to You"—Dr. R. C. Newton, page 116.

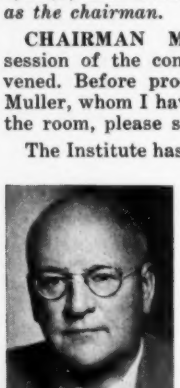
Review of Scientific Research Activities of the Institute—Dr. H. R. Kraybill, page 120.

PROCEEDINGS OF THE CONVENTION

Recent Research Affecting Industry on First Session

THE forty-second annual meeting of the American Meat Institute convened at 2:10 p.m. on September 2, 1947, with Oscar G. Mayer presiding as the chairman.

CHAIRMAN MAYER: This first session of the convention is now convened. Before proceeding, would Juan Muller, whom I have seen in the rear of the room, please step forward?



O. G. MAYER

The Institute has for years recognized the meritorious service at convention time of 25 and 50 years of service in the industry. It has occurred to some people in the Institute that this recognition of service might well be given to a man who, while not a member of the industry, has served it with great loyalty and ability for over 25 years. For that length of time, you have presided directly over all the great banquets which this Institute has held. Never have they been anything but brilliant successes and for this important contribution to our industry in organizing and managing these banquets, I now take pleasure in tendering to you, Juan Muller, one of the Institute's 25-year buttons.

JUAN MULLER: I thank you, gentlemen. This was rather unexpected and I feel very proud of having the honor of being one of you. In 1911 Mr. Oscar Mayer, the father of Mr. Mayer here, was a chairman of a banquet committee. Since then I have had the pleasure of serving on almost every one of them and I feel very proud and hope to be of service to you for many years to come.

CHAIRMAN MAYER: Gentlemen, this is the scientific session of the convention and I am glad to be permitted to preside over it for I have always felt that the solution of our postwar problems could only be had through the scientific approach.

Scientists and engineers won the war for us. Now, they should win us peace. With all her coyness, tight-lipped Dame Nature has a weakness for the scientists. That hard-working chap seems to have the right approach, for to him she tells her wondrous secrets and thereafter does his bidding without resentment or reproach. She has to date been most responsive in the physical sciences, but that is more or less the scientist's choosing. He likes best to work with material things—gears, levers, molecules, electrons—because they are consistent and obedient and even at times predictable. By measuring and knowing these entities, he and the engineer have created the amazing technology which is, for better or for worse, the basis of our material civilization. All we now ask of these men of science who have, over the centuries, unlocked nature's secrets, both benign and destructive, is that they do everything in their power to work towards a society in which men can use their miraculous discoveries for man and his civilization.

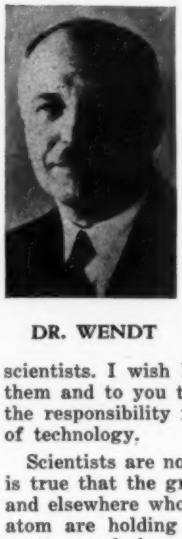
Our first speaker today is a chemist and an editor and an author, who was born in Davenport, Ia. I think we always like to know where a man was born. After attending Harvard he became a chemist with the United States Bureau of Mines and fater various teaching positions came to the University of Chicago as an associate professor. He was for a time assistant director of research of the Standard Oil Company of Indiana and scientific editor of *Time* magazine from 1942 through 1945. Since then he has been the editor of *Science Illustrated*, a McGraw-Hill publication.

Ladies and gentlemen, I take great pleasure in introducing to you Dr. Gerald N. Wendt, who will speak on the subject, "Research Unlimited."

HONOR HOTEL MAN WHO STAGES ANNUAL DINNERS

Juan Muller (at rostrum) maitre d'hotel of the Palmer House, is shown after receiving his 25-year AMI service button from Oscar G. Mayer, president of Oscar Mayer & Co. at Chicago, Illinois. The presentation was made at the first general session on Tuesday afternoon.

DR. GERALD N. WENDT: I think it is characteristic of you, and rather unique, that you begin the meeting that is to last three days by devoting the first session to science.



DR. WENDT

It was this Institute that first—many years ago when I was still in Chicago — emphasized the place of science in industry and I am glad that the success of science in your hands has been such that you still respect it.

I wish I could take up Mr. Mayer's challenge immediately and speak for the scientists. I wish I could point out to them and to you the great problem of the responsibility for the advancement of technology.

Scientists are not very responsive. It is true that the group here in Chicago and elsewhere who are working on the atom are holding each others' hands, pretty much in trembling at the possible disastrous consequences of their work. They are not very optimistic that the world will live up to the job they did. But science, as a whole, cannot engineer this world; the problems of politics are too difficult. The politics of emotional reactions to those situations are not yet mastered by science. No, I believe the responsibility lies in ordinary people, especially in business men, to understand what the scientists are doing, and to speak for them, to adjust political and social conditions so that we can best make use of the knowledge we have.

We meet in a time of fundamental change throughout the world. It is a junction of eras when much of the old world is crumbling and a new world is emerging. The great shock of war brought appalling destruction of physical structures and of human life. But it did more than that. It cracked the foundations of age-old institutions.

Now, and for years to come, we shall witness social crumblings, the fall of empires, the disappearance of nations and, finally, the upsurge of races that have long been backward, the emergence of new classes and new social forces. For us in America, it is a time of crucial readjustment to a new world and new responsibilities.

But for statesmen and business men, for all scientists and engineers, for university professors and industrial research men, the vital and fundamental change is the revelation during this war of the vast power of scientific research and its incalculable political and social consequences in our universe today.

It is hardly necessary to specify, for the first obvious fact is that the war was thereby won. But behind that fact is atomic energy, the most decisive single development since civilization began. It grew from a desperate gamble in a ruthless war between research organizations—German and American. The end will not be visible for decades.

Wartime Research

Another result of wartime research is the incredible growth in our speed of motion, on land and sea, but especially in the air, which has shrunk the world to a mere neighborhood, but a neighborhood that contains 2,000,000,000 people. Still another is the remarkable extension of the power of the human senses over vast distances, the power to see by radar for 200 miles, through the thickest clouds and in the black of the night, the power to detect ships, planes and cities by radiations that our unaided senses cannot feel, the power of speed around the world.

Finally, the war revealed to us the importance of the biological sciences and the miracles that can yet be accomplished by microscopic plants, by radiation, by adaptations of the human organization to strange conditions. These four—the atomic nucleus, speed of motion, enhancement of the human senses and the emergence of biology—have all caught the public fancy so that we in science face great expectations. We are challenged as never before by the opportunity, as well as by the fear of our powers.

FROM ST. LOUIS AND BOSTON

TOP: Louis J. Gruensfelder (left), president, Gruensfelder Packing Co., St. Louis, Mo., discussed the Chicago weather (hot) with Wm. G. Mueller, jr., president of the American Packing Co., St. Louis. BOTTOM: Albert Lewis, president, Deerfoot Farms, Inc., Southborough, Mass., and Barnett Miller, vice president of Boston Sausage & Provision Co., Inc.

THREE ACES

Left to right are J. H. McCall, vice president of J. H. Allison & Co., Chattanooga, Tenn., and former chairman of the board of the Institute; R. J. Eggert, associate director of the department of marketing of the AMI, and Ralph Daigneau, vice president of Geo. A. Hormel & Co., Austin, Minn.

The result for us is a re-examination of the status of science in society, the foundations of research and engineering and the validity of patent laws. At such a time we must not be surprised that the familiar institutions under which we have always functioned are being questioned, nor must we hesitate to bring them up to date, to adjust them to the world of tomorrow.

New Controlling Conditions

I must be more specific and can call to your attention a half-dozen new conditions which have resulted from the war, which control the present situation with respect to science and research and which must be reckoned with in all future plans.

The first is the startling fact that the people of the United States own what is known of atomic power and atomic energy. They spent some $2,000,000,000 on it during the war, and are spending $500,000,000 a year to develop it. They own far more than they realize because so much of the new knowledge is still secret.

And besides this, the people of the United States have invested heavily in radar and rockets, guided missiles, biological processes and medical facts and principles which were not in existence five years ago. It is a vast new storehouse of wealth that is essentially public property. This is a fact as important for the future of the United States as was the public ownership of the great West 100 years ago. It is a fact that must be reckoned with in the future of science and research.

A second such fact is that the international competition for war and for war weapons apparently will continue. The hopes of peace are still feeble. Thus the armed forces have a compelling need for the continuance of research in the development of present weapons and the research on new ones. This, too, is a fact that must enter all calculations.

The third is the fact that the war researches were essentially development rather than research. They constituted high pressure, high speed application of fundamental science that had been ignored prior to the war but that had been established by many slow years of rather amateur research in the great centers of learning. Much, indeed, of this fundamental science did not originate in America but was drawn from the international tree of knowledge that had its roots in the great universities of all the world.

Atomic Bomb Development

In the development of the atomic bomb, for instance, we had not only the knowledge but the scientists themselves from England, France, Italy, Germany, Denmark, Hungary, Russia and China. Those roots have dried up. So greatly did we draw on our fund of knowledge that the frontiers of engineering development are now dangerously close to the frontiers of knowledge. Fundamental science itself is largely exhausted. To replenish our store of this basic knowledge is another prime task of today.

And there are several conditions that make this job very difficult. The first is the cost of a modern research installation. Time was when a professor could do wonders with a $500 grant from a foundation for an instrument that would do his measuring. Time was when a few tens of thousands of dollars would support the research activities of almost any corporation but that time is gone.

BUSY AMI STAFF MEMBERS

Jack Milton and Grace Mueller, both of the American Meat Institute staff, were two of the top contenders in the competition for the convention's busiest people. Exhibit arrangements were their responsibility and they were handled with system and dispatch.

Today we speak in millions and build cyclotrons and betatrons and automatic calculators which require the major efforts of a great industrial corporation for months. The research laboratory can no longer be built on a shoe-string and operated on the devotion of its staff, the hope of commendation from the experts and perhaps a fancy obituary at the end.

Cost a Handicap

This increase in cost comes at a time when the universities are poor and when the sources of their income have largely disappeared into the tax pool, and when shrunken endowments are stunned with the need of more buildings and higher salaries, more and better teaching. It comes, furthermore, at a time when the research programs of the universities are practically in suspension or dead.

During the war the universities' research lived on war funds and war ideas. The vigorous intellectual, philosophical life in the universities was so long tied to the war emergency that many professors are still blinking their eyes at their release and are hesitant to pick up the threads of their almost forgotten prewar thinking. There are vast, vacant areas that must be filled.

Finally, one more grave handicap for the revival of research is the lack of enough trained men to do even the job that the Army and Navy require. The young active minds have already been enlisted in full-time or part-time work on the military and naval researches. There is a terrific need of good teachers to train the million war veterans who have swarmed into our colleges.

In the next ten years there will be a deficit of tens of thousands of competent research men and engineers which makes it almost impossible soon to meet the public expectation of miracles from science. Let us hope that never again will the seed crop be harvested and that never again will we face a critical decade with a tragic lack of personnel.

These are conditions then that control the future: public ownership of the great scientific developments of the past five years, the vital need for a further program of military and naval research, the exhaustion of our reserve of fundamental science, the cost of research nowadays, the poverty of the universities in funds and ideas and a serious lack of trained men for the task ahead.

New Factors Available

On the other hand, there is an even larger number of by-products of wartime science which are available for future research and which can be used to good advantage in the years that lie ahead.

One is the demonstration during the war years that there need not be so great an interval between the birth of an idea and its use in practice. We have learned that speed is possible if we are willing to spend money instead of time. We need not do our tests in sequence, one after another in logical order, but can do a dozen or a hundred, all at once, most of them, perhaps, fruitless, but with the assurance that an answer will be forthcoming in a week, instead of in six months.

WASHINGTON AND LONDON VISITORS

TOP: R. F. Kieldsen, AMI northwestern representative (left), and Dr. A. R. Miller, chief of the Meat Inspection Division, USDA, Washington, D.C. exchanged technical data in the registration foyer. BOTTOM: Bernard Laurenson (left) sales representative for Wilson & Co., Ltd., England, came from London for the latest information. He is shown with Al Wilson, manager of the casings department of Wilson & Co., Inc., Chicago.

This was so strikingly demonstrated that there is even the impression that almost any problem can be solved if only enough money be spent upon it. This conclusion is by no means correct. But it is true that a yes-or-no answer can be obtained in double-quick time, or even in dozen-quick time.

We have also learned to extrapolate from a test tube to the operating plant without benefit of pilot operations. The greatest gamble in history was the building of the enormous plants for the production of uranium 235 and of plutonium with little or no experience in small-scale operation. Thanks to superb skill, to engineering know-how and good mathematics, we won the gamble. No engineer will ever want to omit the pilot plant, but we know that it can be done if speed is essential.

Another item in our education in the possibilities of effective research lies in the proved value of teamwork. The great Radiation Laboratory at Cambridge, the so-called Metallurgical Laboratory at Chicago, the complex but thoroughly integrated Manhattan District of the Engineer Corps, the Army Air Forces research achievements and the triumphs of the Medical Corps—all were based on the close cooperation of scientists from many fields.

The indirect attack, the random idea from a different field of science, the unsuspected fact that is well known in other professions time and again provided the answer. It is a lesson that has been well learned. One striking result is the number of physicists who have addressed meetings of the engineering societies in the last year or two, the number of chemists on the programs of the physical societies and of the medical societies.

Another is visible in the impressive program of research on atomic structure and atomic energy at the University of Chicago, where the Institute of Nuclear Studies, the Institute of Metals and the Institute of Radiobiology and Biophysics are in close allegiance and will be located in a common research center. Cooperation and teamwork will characterize research henceforth and will enormously complicate the task of management.

Still another new factor that can fertilize future research is the new consciousness of their power that now characterizes the scientists and the scientific societies. The neglected and long-haired professor has become a saviour of the nation. The scientific socities no longer live merely on mutual admiration but realize that they are vital parts of our country's future.

The recent comprehensive study of the American Chemical Society made by Mr. John Hancock is a landmark in scientific history because it gives that society not only a stature that is comparable with the Bar Association, for instance, but also a consciousness of its destiny and of its social function which is equal to that of education as a whole, or even of religion. The scientists are not isolated, they are very important citizens now.

Research by Industry

One more factor that contributes to the new pattern of research lies in the new and expanded research laboratories that have been established during and since the war. The Eastman Kodak Co. has announced that its expenditures for research this year will approximate $11,000,000. The Standard Oil Company of New Jersey is building two major petroleum research centers, one at Linden, N. J., the other at Baton Rouge, La., which will involve as much as $8,000,000 for construction alone.

The Ford Motor Co. has announced a new research and engineering center that will cost $50,000,000. And the new General Motors research center, north of Detroit is of equal scope and cost.

General Electric has announced its plans for the construction of a new $8,000,000 research laboratory in the outskirts of Schenectady, which will bring the research staff to a total of

230 scientists and 840 individuals. Countless others might be mentioned. But the expenditure of no less than $500,000,000 in industrial research projects is indicated.

In addition, there is a ferment in the regions of this country which have not yet been greatly industrialized. At Kansas City the Midwest Research Foundation has been at work for only two years but has already produced striking results which will aid the economy of the great Southwest. At Spokane, Los Angeles, Dallas, Birmingham, to mention only a few, there are projects under way for locally financed research institutes for furthering the prosperity of their areas.

Finally, more than a score of universities have announced the organization of applied research services which are available to the industries in their localities. There is ample industrial and local enterprise that promises brilliant research in spite of high costs and lack of sufficient men.

Still another factor that will distinguish the future from the past is the emergence of biology into the industrial scene. Not long ago, biological industries comprised the stockyards, the flour mills and bakeries and the beverage industry. Today biological products such as vitamins and hormones are common commodities.

Emergence of Biology

The production of antibiotics such as penicillin and streptomycin involve the cooperation of engineers with mycologists and bacteriologists. Biological engineering is becoming an established profession. And there is more to come as we realize the full implications of the wartime researches on biological weapons. It is quite possible, in spite of the atomic bomb, that the next war will be a biologist's war as the latest was a physicist's war and the first World War belonged to the chemist.

And then there is the human factor in research. This includes the recognition that machines and processes do not operate themselves and cannot operate at all until they are designed so that they can be easily controlled by ordinary human beings with two eyes, five senses and ten fingers. A considerable fraction of research effort is now going into a field that has hardly yet been named.

Such terms as psycho-physics and biotechnology have been applied to it but perhaps psychological engineering covers it best. It, of course, includes such studies as the measurement of human beings and their fitness for their job, a measurement which is not merely physical or even medical, but includes psychological aptitudes and susceptibility to emotional disturbances and mental disease.

Is this recital of new factors in future research becoming tiresome? I believe that it is essential for those who plan the future to be aware of the resources at their command and of the trends in science and in society which will have an inevitable bearing on the success of the programs proposed. So let me mention one or two more of these new factors.

CAME FROM DOWN UNDER

Mr. & Mrs. Thomas O'Sullivan came a long way to attend the meeting. The couple flew from Sydney, Australia, about a third of the way around the globe. O'Sullivan is owner of O'Sullivan Bros., meat firm which is located in Sydney.

One of the most striking and one which goes beyond both biology and psychology is the present close relation between scientific research and the social sciences. Time and again during the war this bridge had to be crossed. One of the most fascinating was the so-called "Operations Research" which used the methods of physics to analyze military operations and their prospects of success. It may seem simple but it was a new thing in warfare to calculate in advance the productivity of an operation with respect to several competing factors.

Instances are the cold-blooded calculation of the effectiveness of thousand-plane raids; or of merchant vessel convoys expressed in such terms as the tons of bombs delivered per aircraft lost; or the number of Japanese ships sunk per hundred hours of man-effort; or the number of merchant vessels saved per new naval escort built. Yet such calculations rendered strategy quantitative. This point of view was brought to bear primarily by scientists because a scientist by profession rejects rumor, opinion, prejudice and rests his decisions on facts—and also because scientists are trained to seek the fundamental factors and to brush aside conflicting and irrelevant data.

The British are developing operations research for studies in civil aviation, in housing and in the steel industry. Thus at least we come close to bringing the social sciences into the great structure of scientific research. They are only in their infancy, of course, but our government of occupied areas has proved the need not only of scientific nutrition and the scientific administration of public health but, equally, the need of a scientific basis of handling peoples psychologically, and of knowing precisely why people do what they do and what they will do under imposed conditions. Increasingly in the next decade social studies will be included in research plans.

One more major factor must be mentioned and hardly more than mentioned, and that is the broad conviction throughout the world today that our knowledge of the universe in which we live is only preliminary, that most of nature still needs to be explored and that most research still lies in the future. Dr. Vannevar Bush has put this in a phrase, the title of his recent book, "Endless Horizons." Only the ignorant and the senile feel that the world of today is adequate. All who think realize that the best is yet to come.

Public Wants More Science

And finally, perhaps the most radical and comprehensive of all the new factors in research is the striking fact that research is now demanded not so much by scientists, not so much by industries with goods to sell, but by the consumer of the benefits that flow from research. It is the public that wants more science. It is the Congress that passed a bill establishing a National Science Foundation.

Though this was vetoed by the President for administrative reasons, it will almost certainly become law in some

FAMILY TRIO FROM GEORGIA

J. L. Roberts, president of the Georgia Packing Co., Thomasville, Ga., poses with his son, John Lake Roberts, jr., and Mrs. Roberts. While Mr. Roberts was busy at convention sessions, his wife and son enjoyed the Chicago sights. They were among the scores of conventioneers from the South who found the Chicago weather even warmer than their own.

form. It is the people of the Southwest who want to know more about their resources. Research has achieved the great new incentive: that the ultimate consumer is clamoring for it even more loudly than are the producers of research. This has many implications but not the least is that for scientists, engineers and patent lawyers who will face a sellers' market in which the demand is far greater than the supply.

These, then, are the new factors that will build the research, the industries and the patents of the future: the possibility of speedy results, the use of teamwork and good organization, the self-consciousness of scientists, the availability of new research centers, the emergence of biological research and biological engineering, the appreciation of human factors in individuals and of social factors, too, and finally, the fact that the public, the consumer, wants this knowledge and all the benefits that it can bring.

Up to this point I have been speaking only as an observer of the development of science in America and have given you no occasion to quarrel with me. I shall venture now to go a bit further in relating these new factors to your industry. I know well that no outsider can tell you anything about the meat industry and I know that your own director of scientific research, Dr. Henry R. Kraybill, has given competent thought to these conditions in making his own plans. I am thus in no position to judge your past or future action nor even to evaluate my own suggestions from your point of view. Nevertheless you may perchance pick up a relevant idea from the passing comment of an outsider. So here are a few suggestions, for whatever they are worth:

The Challenge

In the first place it is fairly obvious that the meat industry, along with most other industries, will have to provide a larger proportion than ever before of the fundamental or pure science on which your future depends. The universities cannot be depended upon, for the reasons that I have given. Foreign nations will contribute little or nothing for years to come. The government may do so, if the National Science Foundation is ultimately established and if the topics of interest to you are incorporated into the Foundation's program.

But meanwhile—and probably in any case—self-sufficiency could well be your goal. A well integrated industry makes sure of its raw materials and a constant supply of new scientific knowledge is an essential raw material for the future of any industry.

Just what the scope and nature of that fundamental research will be, I cannot surmise, of course. But it must be based on a truly fundamental point of view. You are engaged in providing the world with attractive, nutritious food, comprised primarily of proteins and fats, with necessary vitamins and flavors. You use the meat animals to

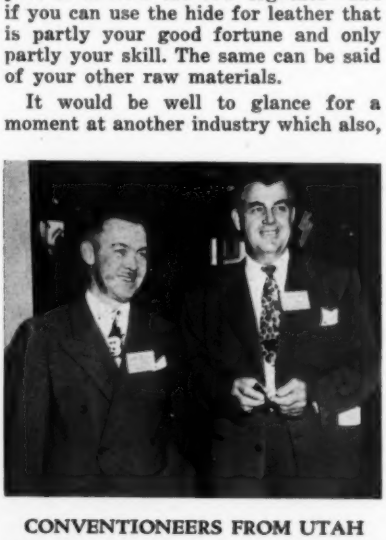
PACKER IN DOUBLE TAKE

Robert M. Owthwaite, vice president of John Morrell & Co., Topeka, Kan., was reading about the AMI public relations department and its pictured chief, Norman Draper, on one of the large displays in the entrance hall.

manufacture these materials for you. Thus the animal is of interest to you primarily as a converter of feedstuffs, most of which are not suitable for human food, into highly nutritious and palatable proteins and fats—a process which is not yet commercially possible in any other manner.

By breeding and better nutrition the animals have been greatly improved. Yet it remains true that you depend on a chemical process which is beyond your control and your knowledge. You make use of natural products which were not primarily intended by Nature to benefit you. No scientist would dare speak seriously of Nature's purposes, yet it seems fairly certain that the hide was not put on the cow in order to provide man with shoes. Its first purpose is to hold the cow together—and if you can use the hide for leather that is partly your good fortune and only partly your skill. The same can be said of your other raw materials.

It would be well to glance for a moment at another industry which also,



CONVENTIONEERS FROM UTAH

J. M. Devine (left), president of the American Packing & Provision Co. of Ogden, U., relaxed in between sessions with E. W. Fallentine, vice president and general manager of the firm.

for years, depended wholly on the accidents of nature. Cotton fibre was not developed by the cotton plant for man's sake but for its own reproduction. Fortuitously it served man's purposes well for thousands of years. But it was not ideal and in recent years superior fibres have been made synthetically in enormous quantities. Rayon and nylon are made by the chemical industry exclusively for man's specific purposes and it is no wonder they improve on Nature.

More broadly still, all the plant industries depend on a chemical reaction which man cannot effect: the production of carbohydrates from the carbon dioxide and water of the atmosphere under the action of sunlight. All life depends on this reaction. How the plant does it has always been a mystery. No man can do it—yet. But within the past few months a very vital clue has come to light by the use of a radioactive form of carbon produced at Oak Ridge.

Carbohydrates Without Plants

Working with Carbon-14 Professor Calvin of the University of California at Berkeley and his assistants have found that carbon dioxide itself plays no part in the light reaction. Instead the exposure of the green leaf to light builds in it a reservoir of reducing power, which afterwards, in the dark, is able to reduce carbon dioxide and to cause it to combine to form the materials of the plant.

It is only the first step in a long series of researches, but already it has greatly simplified the problem. It offers increased hope that before long man can eliminate the green plant and can make carbohydrates—including perhaps both foods and fibres—direct from the carbon dioxide of the air and from sunshine. Indeed, with the potent radiations from atomic power now also available, we may even dispense with sunlight, once the reaction is mastered.

This is true fundamental research and priceless. Insofar as it affects the supply of carbohydrates it may well have an effect on your industry. But your own reaction—the conversion of crude feedstuffs into proteins and fats—how is that accomplished? Why is it that only the animal can do it, and unconsciously at that? If we can duplicate the plant reaction, shall we also duplicate the animal reaction some day?

I have no doubt that somewhere among the many laboratories that are using radio-isotopes from Oak Ridge there is one that is already at work on this physiological problem. It is more than probable that we shall soon know just how the animal manages this conversion and builds his own body from the elements of plant food. It is no doubt a very complex process but once we understand it, it too can be improved in the animal and perhaps later duplicated without using the living cell as the unit of our manufacturing process.

I do not mean to imply that this knowledge will come in any single or simple step. It would involve a much

better understanding of blood chemistry than we now have, and a long study of the nature of the proteins. The complexity of the chemistry of the amino acids is currently being revealed but we are still a long way from the synthesis of complex proteins.

It may indeed require a much better knowledge of the growth process itself, or even a real understanding of the nature of life. All these are big problems along the way but all of them are such as can be illumined by the use of radio-isotopes such as Carbon-14. In so complex a situation a sudden simplification has a way of happening. Hence my major point is that this type of pure science research could wisely be a part of your own program.

Protein Manufactured

At the risk of stirring up your very proper protests I could venture to point out that the meat animal is not the only one that can successfully make high quality protein and vitamins out of the crude feedstuffs.

There is a very important cloud on your horizon in the fact that the microscopic yeast plant can conduct this reaction very neatly, very fast and very cheaply. This does not mean that one can compare yeast with meat, but it does mean that the yeast plant may serve to give us the information we need to understand the reaction. In that case, it would seem wise for the meat industry to discover it before the brewing industry does. My first point, then, is that pure research will become an increasingly important part of your research program.

My second point is more specific. The meat industry is already our leading biological industry, with many ramifications that involve nearly all the biological sciences, the medical sciences and biological engineering too. It now appears that the biological sciences will expand and will become far more important to American industry, economics and the American standard of living than they have in the past, especially in view of the possibility of large-scale biological warfare.

It is certain that we shall see many new biological industries and biological professions springing up within the next decade. It would seem to me that your industry, as the unquestioned leader in the field, should not only be fully aware of this major development in science but should sponsor and promote it. The opportunity for leadership is great and I have no doubt that you will accept it as competently as the founders of your industry accepted the challenge in the commercial development of the meat industry two generations ago.

What the Consumer Wants

My third major point is that the demand of the American consumer for more science and more research is very significant. In the past research has been almost exclusively in the hands of producers and it has almost exclusively been production-minded. Americans are accustomed to the rival claims of many producers in meeting their needs, but they know very well that the producer is committed to a definite product and can only argue for his own.

VISITORS FLASH A BIG SMILE

This smiling trio of packers faced the photographer's flash bulb before entering the meeting hall. They are (left to right): Joseph Sokolik, secretary, Royal Packing Co., St. Louis, Mo.; William L. Lavin, vice president of the Sugardale Provision Co., Canton, O., and Stephen B. Caporal, sales and purchasing division of Cherkosky's Meat Co., Inc., Philadelphia, Pa.

There are, for instance, many competitive materials in use for roofing. Each manufacturer uses science to improve his product for that purpose. But one is committed to copper, another to galvanized iron, to asbestos, or tile, or asphalt, or wood. There is no one to undertake research to find the best roofing irrespective of prior commitments. That is the kind of research the consumer is coming to demand with growing insistence.

Now your industry is very close to the consumer: your products come closer to him than anything else he buys. You have done such a good job in public education that the consumer readily—and correctly—thinks of you as working for him. More and more this attitude will become valuable. More and more it will have to be earned. So it seems to me that the basis of your strategy should be to move ever closer to the consumer and to work in his interests. More than that, the consumer should ever be aware of what you are doing for him so that you may retain his confidence.

And finally, that confidence will be based increasingly on your competence in science and research as, with the years, the consumer becomes increasingly science-minded and therefore increasingly discriminating. This healthy development of the American public, this education in science and the scientific method of thought, is of course one to which I have devoted my life and recently a new magazine for the general public, so that I feel that I know whereof I speak.

This mention of the consumer, who is the purchaser of your products, leads me to my last point. It is a broad one. It is the conviction that the production of goods, even the production of food, essential though it is, will not be the major concern of American business in the years ahead. We already know how to produce more than we can normally consume. We have already had one great depression, ostensibly caused by overproduction. We are in grave danger of another. Enough production for what we call normal conditions can now be taken for granted in almost all lines of industry.

And that production can in very many lines of business be enormously increased by the use of automatic machinery. When such wartime devices as the automatic pilot, the proximity fuse, the electric eye, remote control and a long list of automatic electronic instruments are applied to industrial production we shall certainly have more and more production with less and less labor. The result will be a decrease in the number of workers employed in productive industry, or a decrease in the hours of labor, or both. This is a quite natural development and merely extends what has been taking place for decades.

Fewer Needed on Farms

Seventy-five years ago, one agricultural worker was required on the farm to keep one man alive in the city. In other words, 50 per cent of our workers were on the farms. Today one man on the farm can maintain four in the city. Agricultural labor now accounts for less than 20 per cent of the labor force. So, too, labor in industrial production can be expected to decrease, and for the same reason, increased output per man-hour.

There has been little change so far; for many years industrial labor has stood at about 30 per cent of our population. But the production per man-hour has been multiplied by four since 75 years ago and the recent conservative analysis of the Twentieth Century Fund expects it to rise to five by 1960. Because of the new automatic machines—and even whole automatic factories—it now seems that the rise will be much faster. So industrial labor will go down as agricultural labor did. This will in turn mean a much greater increase in the service and recreational industries, which have already increased from one-fourth to one-half of all our employment.

This historic development has one major moral that must be borne in mind. It is that our economy can keep the pace only if industry is constantly aware that one of its major products is purchasing power. If the service and recreation industries are to play so im-

portant a part, then the wealth which supports them must nevertheless be created by the productive industries, both agricultural and industrial.

Agricultural America has adjusted and is quite content to produce food for five times as many people as live on the farms. The wealth that the farm produces creates purchasing power for a large fraction of the country. Now comes the turn of industry to produce more than the industrial workers can consume and—by creating purchasing power—to support an American life and American civilization that goes far beyond the essentials of staying alive and is enriched by all the many activities of service and recreation industries.

That can happen only if the producing industries keep in mind that purchasing power is one of their primary products. This has more ramifications than I can go into here—indeed more than I am competent to discuss—especially if we take into account the colossal need of creating purchasing power abroad and setting the whole world on its feet. But the fact remains that the manufacture of products is not enough, and the earning of profits is not enough; it must be accompanied by the conscious objective of creating purchasing power as well.

To repeat briefly, I have suggested that the consideration of "Research Unlimited" in your own programs should include the realization that there are four vital needs ahead of you. They are: the need for much fundamental research, the opportunity of taking the lead in the coming development of the biological sciences, the challenge to integrate your own development with the demand of consumers for better products and more research and the need to realize that what keeps America prosperous is purchasing power.

I greatly appreciate the opportunity to share my thoughts with you and close by disclaiming any pretense to be right in my analysis and by claiming only a sincere effort to think through the problems that face the industries that are based on science—especially the American meat industry.

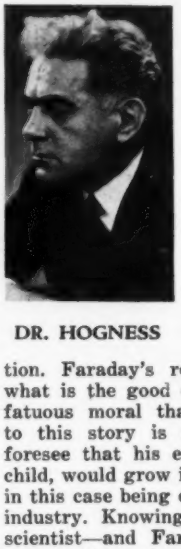
CHAIRMAN MAYER: All of our speakers today are chemists, but your next speaker has veered off into the newest, most fascinating, as well as the most disturbing field of science, that of atomic fission.

Our speaker was born in Minneapolis. After taking his science degree at the University of Minnesota, he studied at the University of California and Ettingen, Germany, in 1926 and 1927. He became associated with the office of scientific research and development in 1941 and served as scientific liaison officer of the American Embassy in London in 1942 and 1943.

Professor T. R. Hogness of the department of chemistry of the University of Chicago, who was closely associated with the developmental work on the atomic bomb on the Chicago campus, will speak to us on "Application of Atomic Energy to Industry."

HOW ATOMIC ENERGY CAN SERVE INDUSTRY IN PEACETIME TOLD

DR. T. R. HOGNESS: In a lampoon on scientists and the industrialists who employ them, *Punch* once said that you should never ask a scientist about the value of his research for he always has a devastating retort in the classic story of Michael Faraday. Hackneyed as it is in scientific circles, orthodox tradition demands that I venture another retelling. During the height of his career, Faraday was visited by a woman with a child in her arms who asked what was the good of all his experimentation. Faraday's reply was: "Madam, what is the good of your child?" The fatuous moral that is often ascribed to this story is that Faraday could foresee that his experiments, like the child, would grow into a man—the man in this case being our present electrical industry. Knowing the temper of the scientist—and Faraday was typical—and realizing the tremendous development from Faraday's "motor" to the huge installations of today, we know that Faraday meant nothing of the kind. If he ever said this, what he meant was that although some practical benefits might come of his experiments, he could not possibly foresee what they would be. Nevertheless, his devotion to his search was no less than the mother's love for her child and equally unconcerned with possible future benefits to mankind.



DR. HOGNESS

Unpredictable Dividends

There are hundreds of other illustrations of the unpredictable and purely incidental benefits that arise out of scientific search for truth alone.

When Antony Leeuwenhoek first ground his short focus lenses and developed the first microscope, he could have had no conception of the multifarious practical uses which would be found for the instrument he had invented. Leeuwenhoek's motives were the search for knowledge, and undoubtedly a certain delight in achievement. His immediate scientific objective was to gain insight into the problem of reproduction. He expected to see the miniature man in the human sperm. When he failed to find it he ascribed his failure merely to the lack of magnifying power of his microscope. While Leeuwenhoek did not directly add to our knowledge of reproduction, yet in building the first microscope he prepared the way for our present science of genetics. He could not have imagined that the microscope would lead to the discovery of the chromosomes and genes and the explanation of the Mendelian laws. Nor could he have imagined the tremendous role the microscope was to play in the understanding of disease and its control. Where would medicine, particularly epidemiology with its vaccines, toxins and antitoxins, be today without the microscope?

Then, there is the case of Wilhelm Konrad Roentgen and his experiment with X-rays. He had no idea that the X-rays he found rather fortuitously would be used in the treatment of cancer, tuberculosis and broken bones. A glance at the list of X-ray laboratories in the classified telephone directory of any large city should impress anyone with the extent to which medicine has found uses for X-rays.

Neither were the Curies interested in practical results. They wanted to find the explanation for the emanations from pitchblende, a uranium ore. But today every hospital of repute has its source of radium for the treatment of cancer, something the Curies could not have foreseen.

Otto Warburg found that one of the respiratory enzymes (body catalysts) contained as one of its constituents the amide of nicotinic acid. This finding suggested that nicotinic acid was an essential food ingredient, a vitamin, and led Professor Conrad Elvehjem of the University of Wisconsin to determine the effects of this chemical on growth and metabolism. He found that "black tongue" in dogs was due to a deficiency of nicotinic acid. "Black tongue" and pellagra are associated and so Warburg's discovery in pure science resulted in the alleviation of human suffering.

I could go on indefinitely giving examples such as the sulfamides, penicillin, aragon and the Mazda lamp, etc., but I believe what has been said is surely enough to convince any one that our age of technology and modern medicine springs from scientific research unfettered by practical considerations, and that predictions of benefits to follow upon any line of pure research are extremely hazardous. The only thing predictable about science is its unpredictability.

Background of Experience

However, after a hundred or more years of scientific development we have a background of experience that gives us somewhat greater confidence in our prognostications for the more immediate future, a future which will be profoundly influenced by Otto Hahn's discovery in 1939 of atomic fission and the ensuing developments.

Two fundamental features of atomic energy can be extensively useful in developing the arts of peace. The fission process, disastrously put to use in the Hiroshima bomb, yields energy in concentration never before conceived. It also is a source of neutrons, from which radioactive isotopes can be made in thousands of times greater quantity than has hitherto been possible. I should like to consider how these two proper-

ties may be applied to our peacetime economy.

Because of the dramatic uses to which atomic energy has been applied, public attention has quite naturally been focussed on the power of atomic fission. One pound of Uranium 235 is equal in energy to more than 3,000,000 lbs. of coal. This factor of 3,000,000 in transportation, moving and handling of fuel, will probably be of some significance in the economy of the future. If one were to view the matter in terms of cost alone, however, the effect upon society would appear to be slight. If the electric companies secured their fuel entirely free, the cost of electricity would be reduced by about one-half cent per kilowatt hour or something like 10 per cent of the average household consumer's bill. The principal cost of electric power is a matter of distribution rather than fuel. But with atomic energy the fuel will not be free, so that this saving to the consumer will be less than this figure. It can be argued that indirectly the consumer will feel the lower cost of power through the lowered cost of production in other areas. But it must be remembered that the cost of power is almost always a very small item in manufacturing costs. The direct economies will probably be relatively negligible. It may well be that the impetus for the development of atomic energy may be determined by complicated problems of international trade.

A nation cannot become prosperous and remain so if its export-import balance is unfavorable. A small margin may make the difference and so it may be that some nation can keep itself in the "black" by not importing coal, even when the internal cost of mining and developing Uranium 235 may seem excessive. Should England find uranium deposits in her own soil it might well become profitable for her to develop these, whatever the cost, rather than import coal. It would be a question of export and import balance.

Power Development Certain

Atomic energy as yet has not been developed for power purposes, but there is no reason to believe that such development will be impeded by technological obstacles. These developments, I am sure, will be successful, providing that the government—and with the McMahon bill it must be the government and, specifically, the Atomic Energy Commission—has a mind to do so.

Economically, the prediction is not so simple—even for an economist. The cost of any product is so influenced by demand that in only the later stages of development can price predictions mean anything. In the beginning of the last war synthetic rubber cost one dollar a pound to produce and an eventual price was set by many optimists at 50c a pound. Today synthetic rubber at 20c is competing with the natural product. A similar situation may well arise in connection with Uranium 235. At this stage of our development I should be very skeptical of either engineers' or economists' estimates of power costs.

Practically all scientists believe that the much-heralded benefits to follow upon emphasized power development will be vastly outweighed by the indirect benefits that will arise from the use of "tracers" in scientific research. These less tangible benefits are much more difficult to appreciate without that feeling, or as the Germans say, "Anschaulichheit," which scientific experience cultivates.

As the microscope of Leeuwenhoek led to untold and unpredictable discoveries, we believe that the use of "tracers" will be of even greater significance to scientific discovery, for it is possible to "see," with suitable instruments, the course of tracer molecules and atoms in the animal body, in the plant, in metal, and in the industrial processes. With these tracers it is possible to learn how atoms and molecules act.

Significance of Tracers

You may perhaps come to a clearer understanding of what is meant by tracers and their significance for medicine and industry if I resort to a very simple analogy.

Suppose I were to paint some trapped timber wolves with a radioactive paint such as is used on watch dials, and then suppose I released these timber wolves and allowed them to go back to their packs. Then, if at a later time, on some dark night, I saw a luminous wolf in the distance, I could assume, since I know the habits of wolves, that there was a pack there. I could follow the movement of the whole pack by watching these one or two luminescent wolves.

Suppose also that I knew the wolf population. I could then determine how many wolves there were in the pack. If I trapped and painted ten thousand wolves, and if I knew that the total population in the area was one hundred thousand, then every time I saw a luminous wolf I would know that on the average there were nine unpainted wolves in the same neighborhood, and so I could count them in that way.

That is just what we do with the atoms. We "paint them with luminous paint." We make one atom in a million radioactive thus making it visible by the use of instruments and enabling us to trace the movements of the "pack." The "painting" of these atoms in large numbers has been made possible by the development of atomic energy. As a result tremendous vistas are opening in biological and industrial research.

Practically all of the molecules in the body contain carbon atoms. These carbon atoms are normally known as the Carbon 12 atoms, but they are the "dark" atoms—the atoms which we cannot see.

By means of atomic energy we are

MIX WORK AND ENJOYMENT

These smiling young ladies were part of the large American Meat Institute staff handling registrations and supplying information during the meeting. Pre-registration was heavy and late registrants got speedy help. Left to right are Mary Glennon, Jeanne Dahl, M. Rust and Irene Martin who relaxed from their duties for a look into the camera.

TWO PACKER TWOSOMES

TOP: H. W. Clubb (left), sausage casings department, and D. K. Saunders, vice president in charge of pork operations, both of the Cudahy Packing Co., Chicago. BOTTOM: Harry Alexenberg, sales manager of Wilmington Provision Co., Wilmington, Del., and E. M. Stickle, Armour and Company, Chicago.

able to make another kind of carbon atom known as Carbon 14, a "painted" carbon which is visible. And it is because of our ability to see these atoms that we have an entirely new approach to scientific problems, particularly those of biology.

Can Measure Age

Carbon 14 is made from the action of neutrons upon nitrogen—the same nitrogen that makes up four-fifths of our atmosphere. Incidentally, cosmic rays coming from without our system and perhaps from without our universe are continually making Carbon 14 in our atmosphere but these Carbon 14 atoms are also decaying, i.e., transforming spontaneously, at such a rate that half of all those present will disappear in about 5,000 years. The net result is that the earth's atmosphere constantly contains about two tons of Carbon 14 as carbon dioxide. This is consumed by both plants and animals, and can be used to determine the age of any deposit containing carbon. The proportion of Carbon 14 to Carbon 12 originally present is known and the rate of decay of Carbon 14 is also known. By measuring the ratio of Carbon 14 to Carbon 12 at any given time it therefore becomes possible to determine the age of any deposit whether it be an Egyptian mummy or a peat bog. With the present sensitivity of instruments, however, a limit of 20,000 years is imposed upon such investigation.

Because of the inherent complexity of biological problems these sciences are not developed to the same extent as the physical sciences. Physical sciences deal with the elements of number, space, time and matter, but the biological sciences deal with all of these and something more, and that something is life. In trying to understand this problem of life, the biological scientists had approached an impasse. With Carbon 14 atoms available untold possibilities are unfolding.

To be sure, the biological scientists can tell us a great deal about the mechanisms within the human body. For example, they tell us that the cause of some diseases is bacteria, but they do not tell us, and cannot tell us, how these bacteria operate; what kind of poisons they secrete, and how these poisons act on the tissues; what is the chemical mechanism that brings about the symptoms which the medical man uses for diagnosis. Nor can they tell us in detail how antitoxins and antibodies act in their preventive capacities.

Many Questions Unanswered

These are problems which are basically chemical, and to understand them completely we shall have to have a chemical explanation.

Nor can they tell us much about the problem of growth. The body is made of extremely complex molecules known as proteins. These complex molecules are aggregates of atoms, often as many as a million. The body puts these atoms together with extreme precision, acting like a sewing machine or a loom, never missing a stitch, to make the perfect design that constitutes the animal body. The method by which the body puts these atoms together, the problem of growth, in other words, is a tremendously complex problem. To try to understand how these complex building blocks, these proteins, are made, how they aggregate to form cells, and to understand the differences between the different kinds of proteins, seems a virtual impossibility unless we can see them. But by means of these isotopes, these carbon 14 atoms which we can see, we have a method of attack.

It seems reasonable to expect that in a foreseeable future we may understand the normal process of growth. And when we understand the normal we shall undoubtedly also understand such abnormal processes of growth as the formation of cancer tissues. Such understanding ought to lead to prevention and cure. There are many other very significant problems to be solved. I will mention only one or two.

What is it that makes the heart beat? Why is it that we can take the heart from a frog, put it away, and months later take it out of the refrigerator and find that it starts beating again? Why is it that we can grow and multiply the heart cells of a dog, and these will continue to grow and multiply and 20 years later we can look at the heart cells under the microscope and find that they are still oscillating, still beating? What is the mechanism of this action? What is the mechanism of nerve action? What chemical reactions take place in the brain when we think, when we remember? There is some chemical reaction that accounts for every biological reaction. These are difficult problems, but I believe that tracers will prove to be no insignificant contribution to their solutions.

Besides being used to understand the functioning of the animal organism, tracers are now being used rather extensively in the study of the formation of sugar and starch from the carbon dioxide of the air by the action of the sun's rays on the green chlorophyll in plants. This has been one of the very baffling problems in science and progress has been very slow, but I am sure that our understanding of this problem will be greatly hastened by the tracers. With Carbon 14 we now can "see" the carbon dioxide in its reduction process.

Tracers in Therapy

Tracers have also been used with some success in therapy. Tracers give out radiation as does radium and some tracers localize themselves in certain tissues and thereby confine their radiations to a small area. Radioactive iodine, for example, locates itself in the thyroid gland. Hyperthyroidism responds to the treatment with radioactive iodine and it is hoped that this same treatment will be made effective in the treatment of cancer of the thyroid gland.

Polycythemic is a disease which results in the production of too many red cells in the blood. The red cells are produced in the bone marrow. Bone selectively removes phosphorus from the blood. If, therefore, the patient is fed radioactive phosphorus, this is taken up by the bone and its radiations

Happy Hunting Grounds for the NP Cameraman

1. Wesley Hardenbergh, president of the American Meat Institute.

2. J. M. Foster, vice president John Morrell & Co., Ottumwa, Ia.

3. J. L. Roberts, president, Georgia Packing Co., Thomasville, Ga., and L. B. Harvard, vice president and general manager of the firm.

4. George A. Eastwood, chairman of the board and chief executive officer, Armour and Company.

5. Robert C. Munnecke, president, The P. Brennan Co., Chicago.

6. P. M. Jarvis, vice president, and John Holmes, president, Swift & Company, Chicago.

7. J. A. Hawkinson, oldtime packinghouse expert.

8. F. W. Specht, president, Armour and Company, Chicago.

9. B. B. Trotter, vice president, Hunter Packing Co, East St. Louis, Ill., and E. V. Theobald, general manager, Abraham Bros. Packing Co., Memphis, Tenn.

10. C. J. Brickman, treasurer, Illinois Meat Co., Chicago, Ill.

11. R. W. Ransom, superintendent technical operations, John Morrell & Co., Ottumwa, Ia.

12. Fred J. Beard, chief of the USDA grading service, Washington, D. C., and T. T. Hackworth, president, Florence Packing Co., Florence, Ala.

13. Walter J. Dill, Industria Empacadora's general superintendent, De Tampico, S.A.

14. E. S. Waterbury, former administrator of USDA meat set-aside orders, with S. W. Lund, vice president, Swift & Company, in charge of hog and pork operations at Chicago.

15. R. W. Unwin, superintendent of the Reliable Packing Co., Chicago, and H. P. Adler, divisional superintendent, Swift & Company, Chicago.

16. Norman Draper, director of public relations for the AMI, with Frank Hunter, jr., president, Hunter Packing Co., East St. Louis, Ill.

17. D. R. Howland, president Miller & Hart, Inc., Chicago, and Ralph H. Daigneau, vice president, Geo A. Hormel & Co., Austin, Minn.

18. Richard Rezanka, vice president, Miller & Hart, Inc., Chicago.

19. W. H. Kammert, general superintendent's office, Swift & Company, Chicago.

20. Hugo Slotkin, vice president, Hygrade Food Products Corp., New York City, with J. S. Scala, president Gold Medal Packing Corp., Utica, N.Y.

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destroy, to some extent, the blood producing ability of the bone marrow. The administering of radioactive phosphorus is the best known treatment.

It is possible that some organic compound will be found which cancerous tissue will remove selectively from the blood. Then if such a compound were made from radioactive carbon, which emits radiation, the radiation would be confined to the cancer tissue alone and would perhaps destroy it. The finding of such a compound would be very helpful in diagnosis and the locating of a cancerous growth. By means of a Geiger counter (the detecting instrument) the surgeon could also determine when all of the cancerous tissues had been removed.

Application in Industry

Another area of research in which tracers may prove significant is industry. The oil industry cannot depend indefinitely on our own dwindling reserves, nor upon those of the Near East. Before long we shall be forced to make our gasoline from coal, as the Germans did in the last war. That is the present big problem of our petroleum industry. The Fischer-Tropsch process employed by the Germans involves the reaction between coal and hydrogen to form a conglomerate hydrocarbon material which must be chemically broken down and reformed into gasoline. This process of cracking and reformation requires catalysts and the finding of improved catalysts is a time-consuming job. The time required to find these catalysts can, I feel sure, be enormously shortened with the intelligent use of tracers, particularly with Carbon 14. Carbon 14 may tell us a great deal more than we already know about methylation-demethylation catalysts.

It is conceivable that the petroleum industry might find it worthwhile to study the history of the near-shore organic deposits in the ocean. By determining the amount of Carbon 14 in them, the age of these deposits, up to 20,000 years, can be determined. A knowledge of the history of their formation may conceivably be of help to the oil geologist in the location of new wells and new fields.

In this last war the Germans made excellent "butter" from coal, air and water (plus vitamins). The economical production of fat and soap from petrolem products requires catalysts and the finding of such catalysts can be hastened with tracers. The danger of "isotope" or "tracer" research is that the problem may too often be selected to fit the tool. But any research director who is hewing to the line and knows the possibility of tracer techniques can surely profit by their use.

Tracer techniques will probably not be of much benefit in metal production. That is not necessary. What we need more is an understanding of the wear and tear of metals so that they can be made to last longer. Think of the metal that has gone into junk piles. The lubrication and wear of bearings needs much study. The Massachusetts Institute of Technology is now experimenting with bearings, one part of which is exposed to neutrons in a pile to make it radioactive in order to determine the transport of metal from one to another part in the process of wear. The wear of the bearing can also be determined by determining the radioactivity of the lubricating oil.

The perfect steel should be ten times as strong as it is. Why isn't it? The answer can only come from fundamental study. Here, too, tracer techniques may yield the answer more quickly.

Many Uses in Agriculture

In agriculture, the field seems limitless. In what form is phosphate, nitrogen, potassium, sulphur and boron more utilizable by the plant? With tracer techniques we can get a concrete answer. On what plants do specific insects feed? Grow the specific plants with radioactive isotopes and then test the insects in an ionization chamber. With plenty of neutrons on hand new species of corn and wheat can be produced at will by irradiating the seed and thus changing the chromosomes, the heredity cells. These are only a very few of the many possibilities in agriculture.

The recent report of the Atomic Energy Commission gives a more detailed account of the progress made up to now. None of the investigations reported so far give much more than promise. But one must remember that we have only made a start. Epoch-making discoveries are very infrequent, but each of these pays untold dividends. Recall again the experiments of Leeuwenhoek, Roentgen and the others.

The difficulties in carrying out our research program are several-fold. Two of these are technical.

Chemists must learn to synthesize in small quantities the radioactive compounds necessary for tracer experiments. Carbon 14 comes in the form of carbon dioxide. This must first be reduced. Until very recently no good method of accomplishing this has been known. Now, however, a satisfactory method has been devised. A compound known as lithium aluminum hydride reduces carbon dioxide to formaldehyde or to methyl alcohol. These latter compounds can be transformed into the desired product with relative ease. In this field, however, much more research is necessary.

More sensitive detecting instruments should be developed. The health hazard to laboratory workers becomes serious if large quantities of tracers are present and precautionary measures to protect the worker against radiation are expensive. The more sensitive the detect-

Quick Glimpses of Men in the Meat Packing Industry

1. Discussing current problems of cost control are (left to right) E. T. Clair (left), president, Republic Food Products Co., Chicago and George M. Lewis, director, department of marketing and accounting, American Meat Institute, Chicago.

2. George A. Swift, jr., assistant to S. W. Lund, Swift & Company.

3. Prospects for Polish type meat specialties formed the conversation between Joseph Slotkowski (left), president of Slotkowski Sausage Co., Chicago, and Gregory Pietraszek, associate editor, *The National Provisioner*.

4. Arthur Sears, vice president, Elkhart Packing Co., Elkhart, Ind.

5. The outlook for livestock supplies held the attention of Harry Reed, director, livestock branch, U.S. Department of Agriculture, Washington, D.C.; J. B. Thorne, vice president of Wilson & Co., Chicago and J. H. McCall, vice president, J. H. Allison & Co., Chattanooga, Tenn.

6. Jay C. Hormel, chairman of the board, Geo. A. Hormel & Co., Austin, Minn.

7. A visitor from South America at the convention was Alfred Gawthrop, consulting engineer, Swift International Co., Ltd.

8. Among Kentucky's representatives were C. E. Field (left), president and E. L. Neubauer, vice president, Field Packing Co., Owensboro, Ky.

9. Left to right are Lincoln Jones, AMI Los Angeles representative; E. D. Henneberry, president, and Lewgene Skinner, director, Hull & Dillon Packing Co., Pittsburg, Kan.

10. Photographed leaving Wednesday's session was W. R. Sinclair, president, Kingan & Co., Indianapolis, Ind.

11. From the Buckeye state came Sylvanus Lugbill, sercetary, Lugbill Bros., Inc., Archbold, O., and Dale E. McCarty, president, Flechtner Bros. Packing Co., Inc., Fostoria, O.

12. Dempster Vissman, C. F. Vissman & Co., Louisville, Ky.

13. J. C. Stamm, branch house sales, Swift & Company, Chicago, and M. J. Blackport, owner, Blackport Commission Co., Grand Rapids, Mich.

14. Viewing the various equipment exhibits was G. Frank Morris, purchasing agent, Kohrs Packing Co., Davenport, Iowa.

15. Thomas Creigh, general counsel, The Cudahy Packing Co., Chicago, and Pendleton Dudley of Dudley, Anderson & Yutzy, public relation counsel of New York.

16. Pictured together are two leading Iowa meat packers, Howard H. Rath, vice president and treasurer, Rath Packing Co., Waterloo, and George M. Foster, president, John Morrell & Co., Ottumwa.

17. Paul W. Trier, president, Arnold Bros., Chicago.

18. Left to right John J. Faust, counsel, and George L. Heil, jr., vice president and treasurer, Heil Packing Co., St. Louis.

19. Richard A. Munnecke, counsel, The P. Brennan Co., Chicago.

20. Hoosier representation included L. N. Clausen, general manager, Kuhner Packing Co., Muncie, Ind., and T. F. Campbell, assistant to president, Kuhner Packing Co., Muncie, Ind.

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ing instrument is, the less radioactive material is necessary, and consequently the simpler will be the problem of protection.

The technical problems can be solved. The more serious problem will be securing adequate financial support for the basic studies that are so necessary.

The cost of research is increasing as the number of private donors is decreasing. Fewer people now have the large fortunes that enable them to support research and education as they have in the past. Therefore, the responsibility falls upon industry and the government. American industry has shown relatively little inclination to give really effective support to universities and research institutes where such basic work is being done. If our national government is as little interested as is industry and the present indications are that it is becoming so, then the United States will inevitably yield its leadership to some other country.

As Spain, by concentrating her energies on the practical search for gold, lost her empire, so we, by limiting our interest to the immediately applicable, may lose a pre-eminence of unimagined promise to future generations the world over.

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CHAIRMAN MAYER: Our third speaker hardly needs an introduction because he has made important addresses to our industry on a number of occasions in the past. You might be interested to know, however, that he was born in Oklahoma. He taught chemistry at Oklahoma A. and M. and Purdue. He joined Swift & Company as a research assistant in 1924. He held the position of chief chemist at Swift from 1931 to 1941, and has been vice president of that company in charge of research since 1941.

He was decorated with the Croix de Guerre with Star in World War I. He is a counselor of the American Chemical Society and has been a frequent and important contributor to patent literature and scientific publications on food and food products.

I present Dr. R. C. Newton, vice president of Swift & Company, who will speak on the subject, "What Scientific Research Should Mean to You."

SWIFT DIRECTOR OF RESEARCH STRESSES IMPORT OF SCIENCE

DR. R. C. NEWTON: You have heard an excellent citation of the facts, which indicates the power of science. You have had outlined to you the scope of the future of scientific research. You have had opened to you a small window which shows the tremendous possibilities of the utilization of one factor, one new tool in science and its possible application to the problems of man. It becomes my duty now to bring you back to the meat packing industry and to tell you what research can mean to all of us who are in the business of preparing meat for human consumption.

DR. NEWTON

Research means progress. It has been associated with science in so much publicity that many people unconsciously supply the prefix "scientific" when they hear the word "research." Of course this is an error because research is according to Webster, a systematic search for new information and may or may not be related to one of the sciences.

The meat packing industry has a long history of research. Our industry was, in fact, a leading exponent of research before science was popularized with the public. Much of the study and experimental work carried on in the early history of the meat industry had to proceed without the aid of highly trained scientific workers. The changes that took place in the latter part of the nineteenth and early twentieth centuries in the handling, processing and distribution of meat foods represent progress that will be difficult for the present or any future group of packinghouse workers to equal.

The people who made these advances worked with principles and objectives which are inherent in any successful research program and are worthy of re-evaluation by those of us who now have the responsibility. In the first place, these men had an economic objective. They foresaw the possibilities of performing a public service in furnishing food to populations far removed from the area of heavy livestock production and they knew that the free enterprise system would return a profit to those who efficiently performed this public service. Secondly, they possessed the courage to break with established precedent. The progress in establishing this industry with the efficiency of operations for which it is still famous, and the utilization of by-products for which it has been famous, is profound evidence that these men could do a fairly good job without much scientific training. They didn't use the same terminology and probably didn't accept the broad use of the word "research" as we do, but they were doing research just the same. Anyone who is engaged in trying to find a better way is doing applied research regardless of what job he may hold.

Must Not Stand Still

It is a mistaken idea to think that we emulate the founders by carrying on our operations as they did a half century ago. The fact is that our predecessors were characterized by their efforts to improve and if we would follow their example we must organize to do an intelligent job of making steady improvements in our methods. The founder of our company had a principle which applies: He said, "The best a man ever did shouldn't be his yardstick for the rest of his life." That is a working rule that applies to organizations as well as to individuals.

There was nothing wrong with the experimental urge of our industrial predecessors and they proved it. Such a program will still pay dividends. To experiment with regular production and without the benefit of a sound scientific analysis is better than no experimentation, but in many instances the same information can be obtained on a laboratory scale and with greater speed and greater accuracy. The realization of this fact by American manufacturers is attested by the increase in facilities and personnel spending full time on research.

To justify a profit, an organization must perform a useful service; therefore, the prime objective of research, like any other function of a business concern, must be the performance of a service. There are many ways in which research can contribute in industry's usefulness to society. Research can contribute by studies that make for more economical production of our raw materials—livestock. It may contribute by the development of better manufacturing and processing methods or by better products. It may contribute by furnishing more information on the usefulness of our products to the consumer. Our industry carries an obligation to support research on all three phases of

THREESOME PAUSES TO POSE

Left to right: L. E. Griffin of P. G. Gray Co., Boston, Mass.; R. S. Cole, vice president and sales manager, Hammond, Standish & Co., Detroit, Mich., and H. C. Liebmann, secretary, Liebmann Packing Co., Green Bay, Wis., took time out from convention activities for a few friendly words in the meeting hall lobby.

our industry—raw materials, processing and use of our products. Such a program will aid the livestock producer and the consumer, both of whom are partners in our industry, as well as ourselves.

Research Must Perform Service

An illustration of this point may be taken from the work of the committee of the American Meat Institute which, several years ago, investigated the factors involved in the so-called dark-cutting beef. The committee of scientists from the industry was successful in throwing considerable light on the chemical reactions that take place in the tissues of beef and which are factors in the brightening of this beef when it is ribbed down. This research has shown quite definitely that when cattle are not cared for properly en route to market or in the yards, especially in inclement weather, there is a depletion of glycogen in their muscles which results in a darker cutting beef.

Another illustration might be taken from the work of the committee of the Institute working with the National Live Stock and Meat Board on a study of Telang livers. The results of this work together with portions of it which were carried out at the University of Wisconsin, show that the nutritive quality of these livers is up to standard and will eventually show the extent to which they should be suitable for edible purposes.

On the other end of our business is the consumer and there are many problems relating to his use of our products. Inasmuch as most of our products are foods we can contribute by the development of information on nutrition.

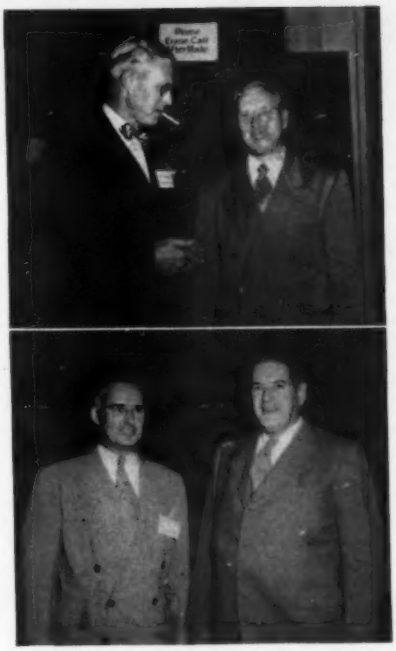
The studies on the nutritive value of meat sponsored by various member companies, the Institute and the National Live Stock and Meat Board, have succeeded in building an interest in the nutritive quality of meat. These researches coupled with the excellent advertising program of the Institute have been successful in arousing public attention to the food value of our products. This has justified the appetite appeal which meats have always had and which has carried our industry along through the dark ages of the science of nutrition in which there was a comparative over-emphasis of certain other vitamin-rich foods.

Consumers Told Merit of Meat

Studies on the method of preparation of food in the home progressed greatly through efforts of research in the National Live Stock and Meat Board and the various member companies of the industry. These contributions to the handling and preparation of meat products and to their utility in our diet may be looked upon as a service to the consuming public, although, of course, it is reflected in the demand for our products and thus it influences the meat packing, retailing and livestock production branches of our industry.

As indicated before, the test and experiment program of many companies is a matter of long tradition in our industry. This has gradually been superseded in part by organized scientific research. It should be recognized, however, that we have not kept pace with the rapid application of science which has taken place in many other industries. As a result, certain products and by-products of our industry have been pushed into an inferior position by developments of other industries. I need only mention plastics as substitute for bones, leather and textiles to illustrate this point. Adhesives of vegetable or synthetic origin are making inroads on animal glue. Vegetable oils and fats have achieved an undeserved position over meat fats.

It is true that many of these substitutes have found their own place in an expanding industrial market. It is also true that some of our by-products could not have filled the volume requirements of this expanding market, but the fact still remains that in many instances products of other industries have taken the preferred position and have thus claimed an important part of the market that might have been ours. There is need for scientific developments which will continually find new uses for our by-products and thus help to pay the cost of animals we purchase as raw materials for the meat food business.



EAST AND WEST MEET

TOP: K. C. Behm (left), casings department, Cudahy Bros. Co., Cudahy, Wis., checks information with Sami Svendsen, Chicago casings broker. BOTTOM: J. F. Buckley (left) New England representative of the Institute, and John J. McKenzie, treasurer, John McKenzie Packing Co., Inc., Burlington, Vt. were snapped together in the elevator lobby.

When on the subject of research needs, it might be worth while to pause a moment and analyze the process of research. There are two distinct steps that must be taken. The first of these is to accumulate accurate scientific facts or information about the materials and about the physical, chemical and biological changes which these materials undergo. This is fundamental or basic research. The second step is to apply this information to the solution of our problems. There has been too often a tendency to consider as our responsibility only the solution of problems which arise in our business. The result is that we do not have in many instances the required basic information necessary to solve our problems. We have relied on the universities to gather the fundamental facts and have spent our time and money on using or applying these facts. This was easy so long as the accumulated backlog of facts was awaiting us, but we have now reached the stage where many of our problems are too complex for the basic information at hand. It now becomes our responsibility to assist in the gathering of the basic data.

The chemical industry in this country is now the largest and most capable of any chemical industry that ever existed in any country. All of this has been built since the first World War and the speed with which this development has been accomplished comes from several factors:

How Strength Was Built

1. There was an accumulation of basic information in the scientific literature built up largely in the universities over a period of years.

2. Business leaders expressed confidence in research by giving financial support to their own company laboratories.

3. The research laboratories in the chemical industry continued with the accumulation of basic data as well as their regular operation of applied research.

The development of the chemical industry is perhaps our best illustration that scientific research is a builder of industry.

More important to the meat industry is the fact that scientific research is moving so fast that new competitors are produced almost overnight. A good profitable business is constantly in danger of being completely replaced by a new synthetic or by a cheaper process. The more profitable the business the greater the danger. I do not mean to suggest that there is danger of a synthetic meat product or of a pill that will fill the place of a complete meal. However, the side issues of our industry such as wool, hides, casings, lard, pharmaceuticals, glue, gelatin, grease, soap, etc., are competitive with the world and the possibilities for substitutes are unlimited.

If research is a builder of industry, it is also a wrecker of industry when

the other fellow is doing the research. This is a fact so self evident that it needs no proof here.

The point that is often missed is that there are two levels of competition which are affected by research. The first is between companies within an industry, and the second is between industries.

Two Competition Levels

There are many points at which your company and mine have common interest in resisting encroachment from outside. There is no doubt that we shall have plenty of competition between the various packing companies, nor that research will be an important factor in that competition, but there is some danger that as a group with common interests we will not adequately support the use of science for the fundamental or basic studies on our products.

It is especially gratifying, therefore, to watch the development of the Meat Institute Foundation and the construction of new facilities on the campus of the University of Chicago to expand activities directed to this objective.

The products of the meat industry are perhaps more complex in their composition, their structure and in their uses than any others sold on the American market. Certainly, the automobile, the radio or the refrigerator are quite simple as compared to a T-bone steak.

If we are to do the best job of research in solving our problems relating to processing, preservation and use of our meat products, we will need a great deal more information than now exists on its structure and composition. We will need to know the chemical and physical changes that take place in these meat tissues. The accumulation of this information about our products has been too long delayed, but now we are to have the facilities for such fundamental studies within our own industry laboratory.

Use of Meat as Food

The ultimate use for most of our products is food. The universities have discovered many facts about the food needs of man and they have learned some of these needs that are met by the use of meat in the diet, but this area of man's knowledge is still woefully inadequate. The scientists in search of fundamental truths have barely scratched the surface. One encouraging sign is the increased interest of nutritionists in determining the use of meat as food.

It is imperative that we know the amino acids and nitrogen and phosphorus compounds which make up these tissues. There is a dearth of information on the trace elements in our bodies or in the meats that we eat.

These are the fundamental studies that constitute the first step in a program of research designed to put science to work on our problems. Without the first step we cannot take the second.

The need for these fundamental facts is common to the entire industry. It is one of the areas of greatest common interest among the various meat packing companies. The application of these facts to the solution of practical problems may in some cases be competitive within the industry, but the accumulation of basic facts about our products is a field in which we have common interest among ourselves and are competitive with other industries. It is a rule of society that people can organize to advantage when they have a common interest and a common objective. The Meat Institute Foundation is such an organization with such an objective.

Seek Government Foundation

There has been much talk since the close of the war leading toward the formation of a National Science Foundation. A great impetus toward this movement was the report of the Vannevar Bush Committee appointed by President Roosevelt. The report of this committee headed by Dr. Bush appeared at an opportune time to catch public attention. It has been acclaimed by the vast majority of scientific workers in this country as a solution to the problem of assuring scientific progress in the future. There have been proposed various pieces of legislation directed toward implementation of the recommendation of the Bush report. These have proposed the setting up of a National Science Foundation under government sponsorship and at government expense. At the various hearings of Congressional committees most of the scientists in the country have approved the plan in principle. The closing days of the last session of Congress saw the approval of one of these bills but the bill was vetoed. The broad objectives of the National Science Foundation have been variously stated. In a few words it is the objective of this movement:

1. To encourage the training of more qualified people in the basic sciences and in the methods of scientific research.

2. To foster and encourage by various means, including financial support, the utilization of these trained people in the advancement of human knowledge regarding the laws of nature.

I doubt that anyone interested in the welfare of this nation or of humanity can take issue with these broad objectives.

There is, however, a difference of views among scientists and others regarding the means of attaining these objectives. There is a feeling that one of the basic principles which has fostered the growth of science and its usefulness to man would have been sacri-

Registration Hall Shots Before and Between Sessions

1. Left to right are Carl Zeitler, treasurer of the Sieloff Packing Co., with Edward Olszewski, vice president, American Packing Co., and George H. Hohmann, vice president, Sieloff Packing Co., all from St. Louis, Mo.

2. Representing Hammond-Standish & Co., Detroit, Mich., were (left to right) R. S. Cole, vice president and sales manager; W. J. Graham, vice president and treasurer; C. M. Van Paris, president, and H. M. Shulman, secretary.

3. W. C. Cooper, F. B. Cooper Co., brokers of New York City; D. A. Kilpatrick, provision department, Rath Packing Co., Waterloo, Ia.; H. McCaw, provision department of Swift & Company, Chicago, and F. W. Gage, provision department, St. Louis Independent Packing Co., St. Louis, Mo.

4. Jack Milton of the AMI; R. G. Haynie, vice president of Wilson & Co., Chicago, and Charles Lee, of the Central Cooperative Association, South St. Paul, Minn.

5. C. E. Tinkle, purchasing agent for Stokely Van Camp, Indianapolis, Ind., with Harry Batt, partner, and A. S. Grossman, Philadelphia Boneless Beef Co., Philadelphia, Pa.

6. I. Solomon, president of the Gardner Beef Co., Gardner, Mass.; B. S. Stearn, president, City Packing Co., Boston, Mass., and Irving Snider, owner, Snider Dressed Beef Co., Worcester, Mass.

7. G. H. Smith, P. S. Brubaker, and A. J. Egan of Smith, Brubaker and Egan, packinghouse architects of Chicago.

8. H. E. Atterbury, Luce & Company, San Francisco, Calif.; G. H. Elliott, George H. Elliott & Co., Chicago, and John Moninger of the AMI.

9. L. M. Kyner, beef department; J. H. Bender, provisions department; Ray S. Paul, beef, veal and lamb department, all of the Rath Packing Co., Waterloo, Ia., and V. A. Gibbs, beef division, John Morrell & Co, Ottumwa, Ia.

10. Albert F. Goetze, president, Albert F. Goetze, Inc., Baltimore, Md.; G. A. Schmidt, president, Stahl-Meyer, Inc., New York, and E. E. Schwitzke, secretary, Trunz, Inc., Brooklyn, N.Y.

11. H. C. Ferguson, president and general manager, Kinston Packing Co., Kinston, N. C.; William Fosdick, superintendent and N. B. Wallace, plant engineer, Oscar Mayer & Co., Davenport, Ia., and W. A. Hodge, accounts manager, Oscar Mayer & Co., Madison, Wis.

12. A. F. Versen of the St. Louis Meat Packers Association; W. G. Mueller, jr., American Packing Co., St. Louis, and president of the National Independent Meat Packers Association, and John F. Krey, Krey Packing Co., St. Louis, chairman of the board of the AMI.

13. A. E. Larkin, jr., sales manager, and R. F. Gray, vice president and general manager, Geo. A. Hormel & Co., Austin, Minn.; L. D. Flavell, vice president and treasurer, DuQuoin Packing Co., DuQuoin, Ill., and Lester I. Norton, vice president of *The National Provisioner*.

14. Standing in the front are Stanley Lipoff, and Harry Lipoff, owner, Lipoff's Wholesale Meats, Philadelphia, Pa., backed up by George H. Hohmann, vice president, Sieloff Packing Co., St. Louis, Mo.

CONVENTION ISSUE

ficed. They fear the attempt to regiment scientific curiosity.

It seems to be clear to everyone that the expenditure of money as anticipated in this legislation will return dividends far beyond the cost. The difference of view lies, then, not in the need for training more scientists or the need for encouraging more fundamental research, but rather in the means of sponsorship of this program which will provide the same degree of freedom that has marked the progress of science up to this point. There have been instances in which certain scientific problems have so caught the public imagination that vast sums of money have been provided to finance their investigation. The result is that scientists are attracted to those fields of research which have sufficient financial support to provide them with facilities rather than going into those fields which attract their curiosity or which by sound scientific analysis seem most important to them.

Presumably it would have been one of the functions of the 24 appointed members of the National Science Foundation to arrange for scientific appraisal of the fields of investigation requiring the most urgent attention. There is, however, a question whether such a board can have at the same time the wisdom and the courage to place the available scientific talent in places where their services will be most fruitful for the future.

Freedom is Balance Wheel

The freedom of the scientist to follow his natural scientific curiosity in choosing the subjects of his investigation has been an important balance-wheel in the progress of human knowledge. I should not like to be listed as one who opposes the formation of the National Science Foundation but I do wish to emphasize that there is some danger that such a foundation with extensive funds may be administered in such a way that operations of the entire field of scientific investigation is thrown out of balance.

We have recently seen the excavation for new and improved research facilities on the campus at the University of Chicago for the exclusive use of the American meat industry. It is hoped that the program of research undertaken at this new institute will be directed to fundamental aspects of our problems which may find their application over a period of many years in the future. It would be a disastrous mistake if the enthusiasm for cooperative action in study of these problems by members of the industry should die out so that the project suffers neglect and does not continue to grow.

There are many such cooperative programs sponsored by private interests which offer great promise and which represent the privilege and responsibility of free enterprise. There are innumerable grants of private funds to institutions for the advancement of human knowledge. These private research institutions and privately supported research projects in public institutions offer the greatest safeguard against regimentation of science. This type of public support of scientific research should be increased to the extent that it provides ample opportunity for those outstanding investigators to refuse the funds of a government subsidy if their scientific curiosity leads them in a different direction.

Private enterprise suffers a degenerative effect when individuals or organizations depend upon the government to carry their responsibilities. It is the responsibility of each of us individually to support those institutions which advance human knowledge, and it is the privilege of each of us to exert our influence on this advance.

. . .

CHAIRMAN MAYER: Our last speaker, a biochemist, was born in Pennsylvania and graduated from Pennsylvania State college, receiving his Ph.D. from the University of Chicago. He has been a leading contributor to technical publications in the chemical and physical sciences. He has been the director of scientific research of the American Meat Institute since 1941 and he will be at the head of the Institute Foundation Laboratory which, as Dr. Newton has told you, is now under construction on the campus of the University of Chicago.

I take great pleasure in introducing our Dr. H. R. Kraybill, who will review the scientific research activities of the Institute during the past year.

PACKERS AND THEIR FRIENDS

TOP: Harry K. Lax (left), F. C. Rogers Co., Philadelphia, Pa. and H. C. Liebmann, sr., secretary-treasurer, Liebmann Packing Co., Green Bay, Wis. BOTTOM: Dan R. Lewis, president, Dan R. Lewis Co., Chicago, and Erwin Mane, president, Mane's Sausage & Provision Co., Cincinnati, O.

KRAYBILL DISCUSSES PRACTICAL PROBLEMS THAT FACE INDUSTRY

DR. H. R. KRAYBILL: I would like to discuss briefly a few of the projects that have been under way in the past year in our research laboratories at the University of Chicago. I would like, first, to take this opportunity to state that these studies are based on work carried out by a number of people in our laboratory and I would like to thank Dr. Vibrans, Dr. Beadle, Dr. Niven, Dr. Dugan, Dr. Wilder and Miss Swartz and their associates.

DR. KRAYBILL

One of the important phases of our studies in connection with the lard improvement program is the work on antioxidants. The belief is held widely that to compete successfully with hydrogenated vegetable shortenings it is necessary to deodorize and improve the physical properties and keeping time of lard. A suitable antioxidant must be added to a bland lard.

At our meeting last year, Dr. Beadle listed the requirements which we feel should be met by a completely satisfactory antioxidant for lard. An ideal antioxidant should have the following properties:

1. It should be colorless.
2. It should be odorless.
3. It should contribute no flavor to the lard.
4. It should be non-toxic.
5. It should be readily fat soluble.
6. It should be effective in low concentrations.
7. The cost should be low.
8. The effectiveness should carry through and protect the foods made with lard.
9. The potential supply should be adequate.

During the last year we have continued our studies to develop new antioxidants and to determine their suitability for use in lard. We have also tested and evaluated numerous antioxidants suggested by others. None of the antioxidants now in use or suggested by others meets all of the requirements mentioned previously.

We have succeeded in developing a new antioxidant, AMI 72, which gives promise of meeting those requirements. The principal ingredients of the mixture are soluble in lard in all proportions. It is colorless and odorless and contributes no color, odor or taste to the lard in the amounts used to give excellent stability. We have found that the addition of from 0.01 to 0.02 per cent

of the antioxidant provides excellent stability. The antioxidant effectiveness of AMI 72 is not destroyed by frying or baking but is maintained to a remarkable degree, not only in the fat itself, but in the prepared products such as potato chips, pastry and crackers. The cost of the antioxidant will be low enough to make its use practical. Toxicity studies underway for a period of nearly two years in our laboratories, at the University of Chicago show no evidences of toxicity when the antioxidant is fed in several hundred times the amount that would be needed to stabilize lard. Since the toxicity tests are not completed, final judgment must be reserved until we have full information on that point.

Table 1 shows the effectiveness of AMI 72 compared with other antioxidants in increasing the keeping time of lard, in protecting the stability of lard when used in deep fat frying and in protecting the potato chips from rancidity. The figures in the column entitled "Fresh Lard" show the results of the active oxygen method in hours. The next column shows the results of the active oxygen method on the stability of the lards after they have been used to fry five batches of potato chips. The next column shows the number of hours until the potato chips became rancid in an air oven at 145 degs. F. and the last column the number of days in air at room temperature until the potato chips became rancid.

It may be noted that AMI 72 and guaiac resin are much more effective than any of the other antioxidants in protecting the potato chips. AMI 72 is superior to all the other antioxidants. Lauryl-thio-di-propionic acid shows excellent shelf life protection at the relatively high concentration of 0.1 per cent but the effect does not carry through into the used fat and the potato chips. G4 at a concentration of 0.250 per cent shows good protection of the used fat but at that concentration the fat darkens in color when heated and the antioxidant effect does not carry through to protect the potato chips.

Table 2 shows the effectiveness of the antioxidants in protecting pastry and crackers. Here again AMI 72 is superior to all the other antioxidants, as the figures given prove.

TABLE 3

Comparative Costs of Antioxidants in Lard

Antioxidant	Conc. Pct.	Cost per 100 lbs. Lard Cents
NDGA	0.01	48.0
NDGA	0.0015	7.7
Citric Acid	0.005	
G4	0.125	9.4
G4	0.250	18.8
LTDP	0.100	20.0*
L. Gallate	0.01	...
P. Gallate	0.01	4.4
G. Resin	0.10	7.5
AMI 72	0.015	7.8*

*Estimated

Table 3 shows the relative cost of the antioxidants required to stabilize 100 lbs. of lard. It may be noted that AMI 72 compares in cost with the cheaper antioxidants used to stabilize lard.

TABLE 1

Effectiveness of Antioxidants in Lard

Antioxidant	Conc. Pct.	A.O.M. Hours Fresh Lard	A.O.M. Hours Used Lard	Potato Chips Oven Hours	Potato Chips Room Days
None		3–7	0.5	18	14
NDGA	0.0015	37	1.0	20	25
Citric Acid	0.005				
G4	0.125	21	2.0	45	30
G4	0.250	26	12.0	81	70
LTDP	0.100	100	1.0	Lost	32
L. Gallate	0.01	21	5.0	103	32
P. Gallate	0.01	42	8.0	159	...
G. Resin	0.10	30	8.0	219	217
AMI 72	0.015	78	19.0	460	358

The physical properties of lard can be modified so that it can be stored without refrigeration, either by adding lard flakes or by partially hydrogenating the entire lard. The studies mentioned last year to determine the effect of hardening lard, by direct hydrogenation and by the addition of different amounts of flakes of different degrees of hydrogenation, on the culinary properties and performance of lard have been continued. These studies include determination of the plastic range, shortening value, creaming power and performance in baked products.

Packers occasionally encounter hogs, the carcasses of which are yellow in color and possess an "off odor," with the result that the inspectors reject them for ordinary meat and lard purposes. The fat must be trimmed and sent to the grease tank and the meat used only under restricted conditions. While the number of hogs encountered with yellow fat has not been large, it seemed worthwhile to attempt to determine the cause in order to prevent the condition from becoming more widespread, because such hogs are "practically condemned."

Through the courtesy of a member company we secured two samples of yellow fat and one sample of regular lard from the same plant at which the yellow carcasses were encountered. The yellow fats were very soft and had a fishy or painty odor. Their iodine numbers were very high in comparison with ordinary killing and cutting fat, 97.0 and 94.4 compared with 68.7 for the ordinary lard. The samples were analyzed by the spectrophotometric methods developed in our laboratories six years ago.

TABLE 2

Effectiveness of Antioxidants in Lard (Continued)

Antioxidant	Conc. Pct.	Pastry Oven Hours	Pastry Room Days	Cracker Oven Hours
None		35	35	419
NDGA	0.0015			
Citric Acid	0.005	44	44	502
G4	0.125	60	60	...
G4	0.250	74	69	347
LTDP	0.100	67	160	...
L. Gallate	0.01	57	75	572
P. Gallate	0.01	45	...	...
G. Resin	0.10	218	180	...
AMI 72	0.015	438	556	1128

TABLE 4

Analyses of Lard Samples

Sample	Iodine Number	Linoleic Acid Pct.
Ordinary Lard	68.7	0.94
Yellow Lard #1	97.0	11.4
Yellow Lard #2	94.4	9.0

It will be noted in Table 4 that the ordinary lard contained 0.94 per cent linoleic acid, the characteristic acid of flaxseed fat, while the yellow fats contained 11.4 and 9.0 per cent, respectively. It had been suggested that the yellow fat may be due to the feeding of fish (carp) seined from lakes, to the feeding of flaxseed screenings or to the pasturing of hogs in a flax field.

Chart I shows the spectral absorption curve of the alkali isomerized fatty acids of the fats. The characteristic three absorption peaks with the maximum at 2680 Angstrom units is due to isomerized linoleic acid. Since the pig cannot synthesize this acid, it must have been derived from the feed. No absorption was found characteristic of the fatty acids of fish oil. We are thus led to believe that the yellow fat condition of the hogs was due to the feeding of material containing linoleic acid, probably flaxseed screenings or hail damaged flax. We now have underway tests with rats to determine whether we can produce a similar condition by feeding liberal quantities of flaxseed. It should be mentioned that the feeding of linseed oil meal, the product obtained when the oil is removed from flaxseed, to swine does not produce yellow fat.

Linoleic Acid and Other Agents

In connection with the Institute's lard improvement program we have been much interested in the question of essential fatty acids. It has been well established that animal fats such as lard and unhydrogenated vegetable oils such as corn oil, soybean oil and cottonseed oil, contain fatty acids which are essential in the diet of rats. Recent work has indicated that during the hydrogenation of vegetable oils certain fatty acids are formed which are similar to but not identical with the essential fatty acid found in the lard and in the unhydrogenated oils. This fatty acid is linoleic acid and is one of several possible compounds of closely related structure. We have attempted to work out analytical procedures which will

enable us to analyze fat specifically for this component, excluding all the non-identical materials.

Professor J. B. Brown at Ohio State university has shown that linoleic acid will form certain bromination derivatives which can be crystallized from petroleum ether at 0 degs. C., while acids other than linoleic will not yield this derivative. We have done work on this method during the past year which has enabled us to make quantitative determinations of the amount of crystals formed and therefore to determine the amount of linoleic acid in the fat. We have compared the results so obtained with the spectrophotometric procedures.

Our data indicate that both the crystallization procedure and the spectrophotometric method give a reliable value for the amount of linoleic acid in lard. In the case of hydrogenated oils, however, the crystallization procedure tends to give lower values for linoleic acid than do the spectrophotometric or the thiocyanometric procedures. Typical results are shown in table 5.

TABLE 5

Identification of Linoleic Acid

Sample	Linoleic Acid Percentage		
	Bromination	Spectro	Thiocyan
Lard	15.00	13.72	14.12
Hydrogenated Soy bean oil..	3.7	9.0	10.3
Hydrogenated c.s. oil	6.2	8.2	8.7
Hydrogenated c.s. oil	5.6	8.1	12.2

This means that the true linoleic acid (the essential fatty acid) content of such hydrogenated fats may be somewhat lower than one would expect on the basis of ordinary chemical procedures. These studies are being continued and we expect them to assist us in evaluating hydrogenated fats in terms of the essential dietary factors. The information will also be of value in studies of lard hydrogenation.

For the last two years the Corn Products Sales Co. has supported a project in our laboratories to study the use of corn sugar in the curing of bacon. It was found that in the dry curing of bacon there is usually a very marked difference in the concentration of salt and other curing ingredients in the slabs from the top, middle and bottom positions in the box. Frequently the slabs in the middle and bottom positions are too salty. This led to a study of means of securing uniform composition of the slabs throughout the box. Mr. Harry Crown of Corn Products Sales Co. suggested the use of a soluble starch known as amijel. A pound of amijel per 100 lbs. of bacon is thoroughly mixed with the curing ingredients before they are rubbed on the bellies. As the moisture is withdrawn from the bellies during the cure, the amijel absorbs the liquid and holds it in position in the curing box.

Extensive curing tests have been carried out in a number of member plants. The results have demonstrated that uniformity of composition can be obtained by the use of amijel but we encountered another problem which must still be solved. When amijel is used with the usual cane sugar cure, the resulting bacon fries dark. This has been shown to be due to the formation of reducing

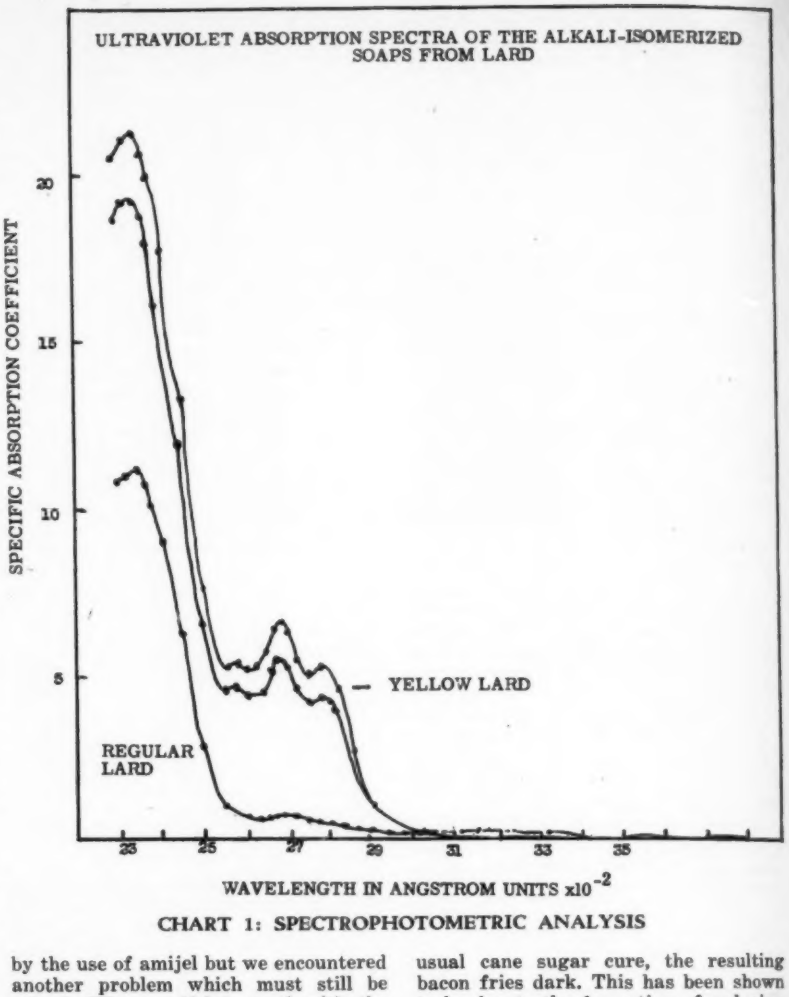


CHART 1: SPECTROPHOTOMETRIC ANALYSIS

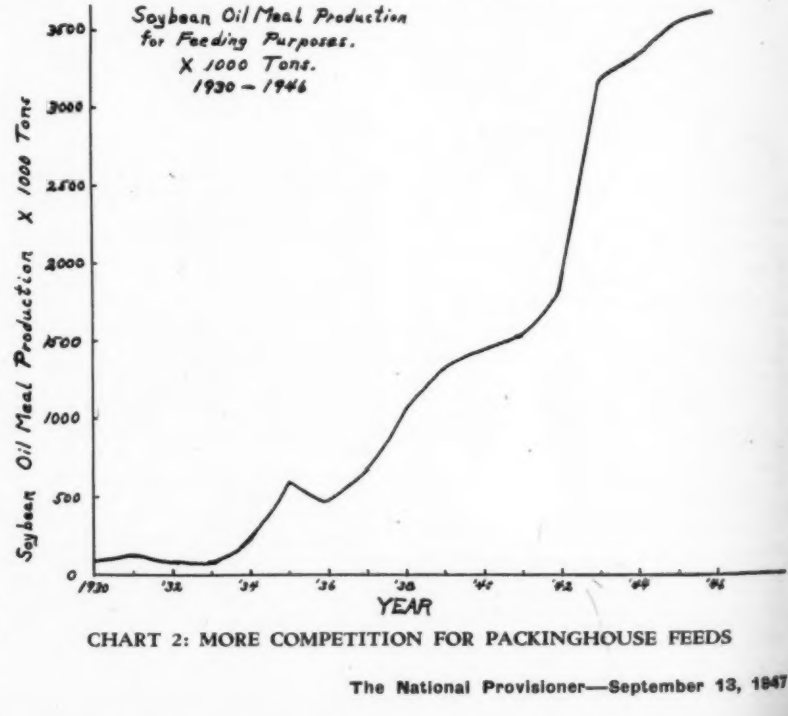


CHART 2: MORE COMPETITION FOR PACKINGHOUSE FEEDS

substances from the amijel. We are now working on methods to overcome this difficulty. We believe that this problem can be solved by further study. If so, we will have a practical means of improving the uniformity of composition of bacon.

Table 6 shows typical results of the effect of the use of amijel in the composition of bacon.

Greenish discolorations on the surface of cured comminuted sausages and meat loaves appear to have been especially widespread throughout the meat industry during the spring and summer of this year. Dr. Niven visited a large number of plants which have encountered this trouble, in attempts to determine the source of the greening and methods of control.

TABLE 6

Composition of Bacon

Position	Salt		Reducing Sugar		Sucrose	
	No Amijel	Amijel	No Amijel	Amijel	No Amijel	Amijel
Top	1.75	1.84	0.065	0.183	0.365	0.547
Middle	2.03	1.93	0.055	0.194	0.520	0.669
Bottom	2.38	1.68	0.056	0.171	0.915	0.551

In virtually every case investigated the greening appears to have resulted from excessive bacterial contamination on the surface of the product after the cooking process, followed by conditions which were conducive to extensive growth by these bacteria. Every green sausage examined has been shown to be grossly infected with bacteria on the green surfaces.

Green Discoloration

When measures have been taken to reduce surface contamination, followed by changes in the methods of handling to lower the holding temperature and reduce the tendency toward "sweating," the problem of greening usually ceased to continue.

In every case of greening of this nature that has been investigated thus far the bacterial flora has consisted of large number of red forms, either alone or accompanied by micrococci or yeasts. These rod shaped bacteria, when isolated into pure culture and streaked onto a cut or uncut surface of a freshly steamed wiener, precisely reproduce the discoloration as observed on the naturally greened sausages.

From a preliminary study of the bacteria associated with surface greening on sausages and meat loaves the results seem to indicate that these microorganisms comprise a rather restricted group. Although this may prove to be a coincidence, the collection is composed of cultures from widely different parts of the country. All of the cultures appear to be members of the genus, Lactobacillus, and though they may not fall into one species they probably possess a series of common physiological characteristics which result in the greening phenomenon on sausages. We are now attempting to gain more exact knowledge as to the origin of the greenish discoloration. Our experiments thus far would lead us to formulate the following hypothesis.

Like all other lactobacilli, these microorganisms are "indifferent" to oxygen with respect to growth, i.e., they are able to grow just as well under anaerobic conditions as in the presence of air. However, in the presence of oxygen these organisms are able to oxidize some substance, or group of substances, with the production of hydrogen peroxide as one end product. These bacteria are devoid of the enzyme, catalase. Also, this enzyme, which occurs naturally in meats, is destroyed in the curing, smoking and cooking procedures. Therefore, the peroxide liberated by bacterial action is allowed to accumulate until such concentrations are reached that will chemically oxidize the red pigment in the meat product. This oxidation appears to go through several stages, one of the first of which results in the green pigment. If allowed to proceed further, colorless substances are eventually formed which would give the sausage a faded appearance.

Using different concentrations of hydrogen peroxide on fresh wieners we have been able to reproduce these color changes. If excess hydrogen peroxide is used the surface of the wiener becomes bleached in appearance, but on cutting the wiener a green ring is apparent just below the bleached area. These green rings below the bleached surface have been observed occurring naturally on discolored sausages, in addition to having been reproduced with pure cultures in the laboratory.

The validity of the above hypothesis awaits confirmation by further laboratory experiments.

In addition to greening of bacterial origin an interesting case of greening on the surface of cooked meat loaves in one plant appears to have been caused, in part at least, by an excess of a commercial hypochlorite coming into contact with the surface of the loaf. The fact that hypochlorite in concentrations as low as 0.5 per cent can cause a greenish or faded discoloration on the surface of meat loaves has been confirmed by laboratory experiments.

Nutritive Value of Meat Scraps

Due to the unusual conditions brought about by the recent war the supply of meat scraps and tankages was not sufficient to meet the demand. For this reason government officials and representatives of state agricultural colleges and experiment stations, as well as feed manufacturers, made every effort to use proteins from vegetable sources in place of some or all of the animal proteins in swine and poultry rations. Intensive research and sales promotional programs relating to the use of soybean oil meal to replace part of the meat scraps and tankages have been undertaken by the soybean oil meal manufacturers. Due to these facts, it was felt that when more normal conditions prevail competition will be more severe. Chart 2 shows the marked increase in production of soybean oil meal in recent years.

If meat scraps and tankages are to maintain their rightful position in the competitive field, it will be necessary to have complete information regarding their nutritive value. In order to obtain this information a program of research on the nutritive value of meat scraps and tankages was undertaken four years ago. The program of research is supported on a voluntary basis by about

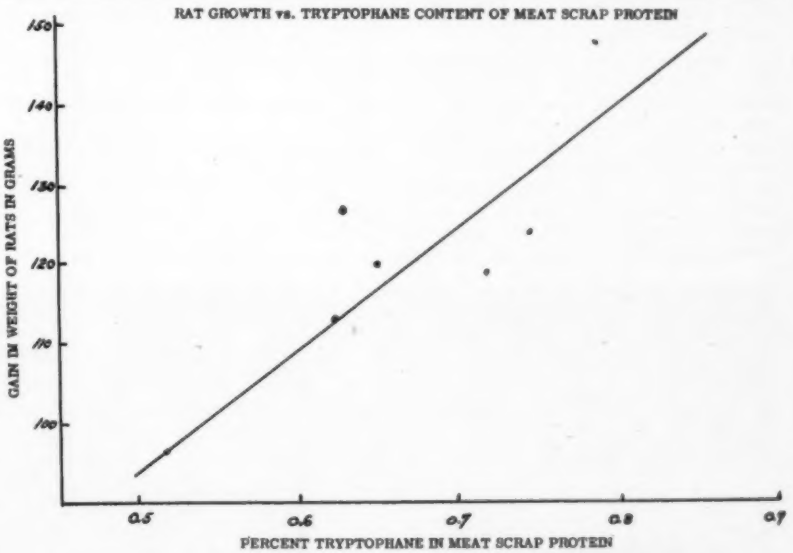


CHART 3: GAIN RELATED TO TRYPTOPHANE CONTENT

60 member companies representing more than 85 per cent of the total production of federally inspected plants. Comprehensive progress reports covering the results of these studies have been sent to the participating members. Over 25,000 copies of a pamphlet giving a summary of the results of the studies have been distributed recently to feed manufacturers and dealers. A series of papers dealing with the nutritive value of meat scraps and tankage have been prepared and are being published.

The effect of different samples of meat scraps on gain in weight of rats on swine type rations was shown to be related to their tryptophane (an indispensable amino acid) content. Chart 3 shows the results of these studies. With growing chicks, tryptophane content was not related to gain in weight but the choline plus methionine content was, as shown in Chart 4. Since methionine and choline were added to the rations in adequate amounts, we believe the factor involved is not choline or methionine but some other factor, the amount of which is correlated with the methionine and choline content. Other studies indicate that the factor involved is the "animal protein" factor.

Table 7 shows that liquid stick, a product formerly considered of low feeding value, is a good source of the animal protein factor.

Other studies in progress in our research laboratory include:

1. Fundamental chemical and spectrophotometric studies of the autoxidation of fats and the mechanism of action of antioxidants.

2. Fundamental studies on the use of high frequency dielectric heating in meat processing.

3. The determination of the amount of twelve of the amino acids (including all of the indispensable ones) in cuts of different grades and types of meat.

The Institute supported research during the last year at Harvard university, Northwestern university and the Texas Agricultural Experiment Station.

In studies of the protein requirements of adults by Dr. Stare and his associates the same diets were fed to humans, rats and to dogs. Three papers have been published giving the results of these studies. Rats were found to react in a manner comparable to humans when meat replaced some of the vegetable proteins in the diet. The biological value of the proteins was increased 10

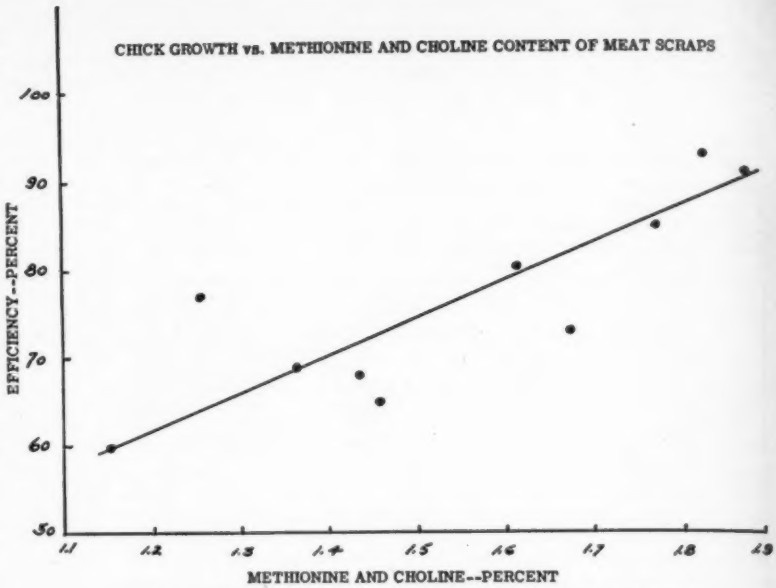


CHART 4: FACTORS INFLUENCING CHICK GROWTH

per cent through the addition of meat but the digestibility was not altered. With dogs, both digestibility and biological value were improved by the addition of meat. It is significant that these studies indicate that the results of many previous studies on protein nutrition with rats may be applied to humans.

TABLE 7

Growing Chicks

Ration	Gain in grams
Practical Protein from plants	538
Practical Protein plus 4% Stick	590
Practical Protein plus Meat Scraps No. 3	584
Practical Protein plus Meat Scraps No. 3 plus 4% Stick	626
Practical Protein plus Meat Scraps No. 5	505
Practical Protein plus Meat Scraps No. 5 plus 4% Stick	644
Practical Protein plus Meat Scraps No. 9	582
Practical Protein plus Meat Scraps No. 9 plus 4% Stick	551

At Texas Agricultural Experiment Station Dr. Lyman and his associates have determined the amount of the indispensable amino acids in the lean tissues and various edible organs of beef, pork, lamb and veal and other protein foods. He has also determined the availability to the rat of some of these amino acids. The results show that the amino acids of meats are superior in availability. Three papers have been published giving some of the results.

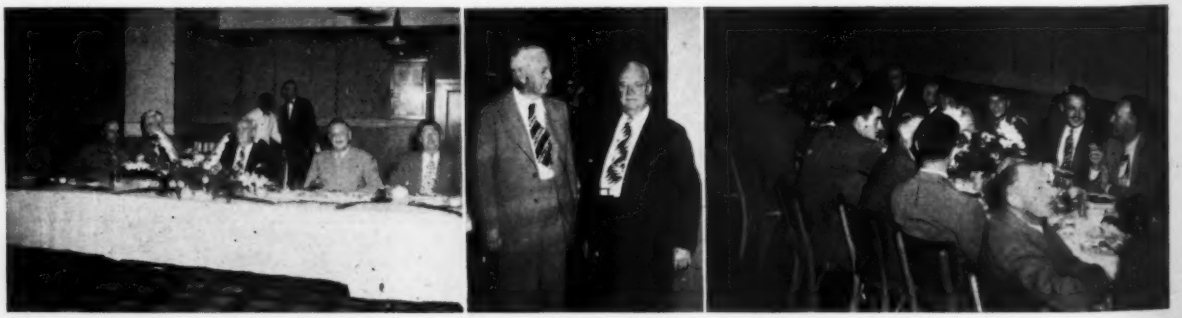
At Northwestern university Dr. Ivy and his associates used 40 human subjects in a fundamental study of the digestion and metabolism of lard and hydrogenated vegetable fats. No significant differences in subjective symptoms were found in the two diets.

It was mentioned earlier that the Institute Laboratory Foundation is underway. The construction of it is proceeding. The basement and the first story walls are almost completed. I would like to take this opportunity to express to our industry the appreciation of all our staff members for what we know to be more adequate facilities.

The meeting recessed at 4:15 p.m.

CANNER HOLDS DINNER PARTY

Mayor Martin H. Kennelly of Chicago (center left) is shown with E. T. Clair, president, Republic Food Products Co., Chicago, at annual Ed Clair dinner held at Illinois Athletic Club.



Sessions 2 and 3

WEDNESDAY, SEPTEMBER 3

MORNING—OPERATIONS SESSION

"Sanitation Pays Dividends"—Dr. D. H. Nelson, page 126

"Modernization of Plant Facilities"—Henry D. Tefft, page 132

Presentation of Gold Buttons—S. Edgar Danahy, page 140

"Supervisory Training" —Harold F. North, page 143

Presentation of Awards for Outstanding Accomplishments in the Meat Packing Industry—E. B. Nattemer, page 146

AFTERNOON—LIVESTOCK SESSION

"Prospective Livestock and Meat Supply"—R. J. Eggert, page 147

"Research in Hog Breeding and Market Type"—Dr. W. A. Craft, page 155

"Cattle and Lamb Feeding Is Changing"—W. D. Farr, page 160

"Speaking for the Farmer"—Charles B. Shuman, page 169

Outstanding Developments in Operational Techniques

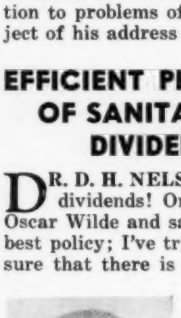
THE second session convened at 10:10 a.m. on September 3, 1947, with Karl T. Maxwell, a member of the board of directors of the Institute, presiding as the chairman.

CHAIRMAN MAXWELL: Our first speaker this morning is Dr. D. H. Nelson. Dr. Nelson is chief chemist with Oscar Mayer & Co. and is an expert in matters dealing with bacteria. His background in this field was obtained by earning his Master of Science Degree at Utah State College in 1923 and 1924. He also attended Iowa State College from which he received his Ph.D degree in 1928.

Since 1930, Dr. Nelson has been associated with Oscar Mayer & Co. in Madison, Wis. He is now the chief chemist of the firm and has paid special attention to problems of sanitation, the subject of his address this morning.

EFFICIENT PROGRAM OF SANITATION PAYS DIVIDENDS—NELSON

DR. D. H. NELSON: Sanitation pays dividends! One might paraphrase Oscar Wilde and say, "Sanitation is the best policy; I've tried both ways." I am sure that there is more truth than fiction in this statement. Everyone has a kind of idea what sanitation is or means, but in the practical affairs of life it is too often that state of affairs which one can get by with. Some people trying no doubt to clear up the question a little say that there is an ordinary sanitation and a technical sanitation. This would seem to imply that there is one sanitation for the lay folk and another for the aristocracy and technologists. In a way, there is a sort of high-brow sanitation.



DR. NELSON

It is common knowledge that some establishments are more sanitary than others. However, sanitation in general has to do with the presence, growth and effects of many of the lower forms of life. These include some rodents like rats and mice and insects like flies and cockroaches, but the chief source of contamination and loss are the micro-organisms. Generally when we speak of an unsanitary place or thing we mean that it is contaminated with numerous micro-organisms. It so happens that the bacteria do not pay any more attention to caste or class in man than do the flies, and they are far more troublesome because they are too small to be seen under ordinary conditions. This is well, because we would perhaps turn into a host of nervous wrecks if the bacteria suddenly became as visible, say, as small worms.

On page 1 of the *Readers' Digest* for August, first paragraph, I read: "Filth in restaurants has reached the proportions of a national plague. It is a disgusting subject to write about. Like you, I would rather look away. But that may be one reason why the situation is as bad as it is." Someone else has a sanitation problem or this is a gross exaggeration. In a sense, though, the above statement is true. Much of our food is laughed into, talked into, coughed into, sneezed into and perhaps cussed into, before it is finally served. The wonder is that we don't have more transfer of illness by this route. Maybe we are, as far as our microflora is concerned, much like the colored man explained to a newly-arrived friend from the South. "Up here," he said, "we is all de same." I have an idea that many people have read the above-mentioned article with the magazine held in one hand and a lipstick-marked glass in the other. Such a person probably had no reaction to what he was reading at all, or perhaps he had a feeling of satisfaction that he had come to such a delightfully clean establishment for lunch. There seems to be something of the psychology of a zealot among those who, indifferent to general sanitation, have an inward feeling of being secure because they eat and drink only at the higher-priced places. Man is an incurable inventor of, and believer in, myths. As a sailor used to say when coming from a prophylaxis station, "Thank God I'm pure."

The packinghouse is an institution established primarily for processing livestock for food. Secondarily, it produces by-products and many additional commodities such as chemicals, pharmaceuticals, etc. The fact that the chief raw materials used in the fabrication of its products are living creatures makes the job in some of its aspects somewhat gruesome. However, since man is an incurable meat eater, and since his advancement and well being (progress, if you will) have run parallel with his production and consumption of meat and other animal food products, it needs no further discussion to class meat packing as one of the most essential of all industries.

The live animal comes to the packinghouse with countless organisms on its skin and hair. Other millions inhabit its intestinal tract. The blood and other tissues are relatively free of living organisms. To turn the animal into meat, it is necessary for the packer to slaughter, wash, eviscerate and otherwise process the animal. Before slaughter the livestock are assembled in stockyards. We need not concern ourselves with this department further than to say that the animals should be at all times kept clean, dry and as comfortable as possible. The pens should be cleaned regularly and well. Plenty of fresh air and clean, cool water should be supplied. If animals are to be held more than a few hours they should be properly fed. They should be handled carefully to avoid bruises either under the skin or in the deeper tissues from wrenching or twisting of the neck or legs. All of this is very important from the standpoint of sanitation because trimmed-out bruises are not only a loss of product, but the parts so affected are in general more densely contaminated by microorganisms than are the other tissues.

The modern killing floor is constructed of hard surface materials. The walls are of glazed tile, glass or other similar hard, smooth, water-resistant material. The pens for handling ani-

PACKER BUYING EXPERTS CONFER

This close up shot of AMI purchasing committee was taken during the meeting of the group on Tuesday morning. F. C. Raney of John Morrell & Co., Ottumwa, Ia., who is chairman of the committee, is seated in the right foreground. Arthur Pearson, head of the purchasing department of the Institute, presided at the session. A report of the AMI group purchasing plan was given by Raney a a general session.

FOSTER PUBLIC RELATIONS

R. A. Rath, president of the Rath Packing Co. and chairman of the AMI advertising policy committee with A. D. White, expert in the public relations field and member of the Institute staff.

mals are of concrete which is corrugated at the time of installation to help prevent slipping and consequent spraining and twisting of the legs. These pens should be cleaned frequently and kept reasonably dry. Hog pens become fouled very quickly but if properly managed the amount of filth carried on the feet or sides of the animals to the sticking pen and scalding tub can be held at a minimum. The walls should be of hard-surfaced material which can be easily scrubbed regularly.

Practice in Australia

It is the best practice, following the brilliant piece of work done by our Australian friends, to wet cattle and calves before slaughter to reduce contamination of the carcass from the innumerable bacteria on the hair and skin. Organisms on wet skin and hair get into the air in only relatively small numbers to contaminate the dressed carcass. By this means and the use of carbon-dioxide conditioned holds, the Australians were able to put their fresh beef on the British market. This was a notable achievement.

Hogs go directly to the sticking pen and after a few minutes on the bleeding rail, drop to the scalding tub. The carcass is in contact with large numbers of bacteria of many kinds but the temperature of 140 degs F. and the concentration of soda ash and lime maintained tend to reduce the micro population materially. The mouth and intestinal tract, as well as the stick wound, make possible the entrance of some organisms into the tissues of the carcass. This has been shown by a number of workers, notably L. B. Jensen in his excellent researches on ham souring. However, the amount of contamination from these sources is minimal in amount and perhaps not spread to all parts of the carcass if there is no delay in operations.

The dehairing machine continues the work of the scalding tub and by its manipulation of the carcass might increase or aggravate the invasion of the tissues by organisms from the intestinal tract. The use of a rosin bath at 260 degs. to 290 degs. F. tends to reduce the flora of the skin and can be considered as one of the newer sanitary measures. Little contamination should result on the killing floor if the structural materials are largely metal and the walls and floor are smooth and hard. There must be an abundant supply of clean water. This is an absolute necessity for all packinghouse operations.

Gross Contamination Cause

It is important that in some places gross contamination results from punctures of the gut, especially the bung. This was reduced to practically zero in a packinghouse where the inspector in charge required all parts of a carcass soiled from this cause to be trimmed off. He said that simple washing was not enough. The men who had said that it was impossible to perform this operation without frequent punctures of the gut were taught to reduce it to a mere fraction of 1 per cent, where it had been as high as 20 per cent at times before. The time from the sticking pen to the chill room should be held to 40 minutes or less. I know where this operation is carried out regularly in an average of 35 minutes. The floor and rails should be cleared before all rest periods and noon hour. When hog carcasses are dropped onto the floor or in cases where they are railed out for additional examination or inspection, the foreman should see to it that they are handled immediately and not allowed to lie around for several hours in a warm room. It is well to remember that as soon as the animal has been slaughtered, and its natural defenses against micro-organisms thereby lost, it is a race between man and microbe to possess the carcass. Someone has said that if man weren't smarter than the pig he probably wouldn't be killing the pig. Likewise if man can't outsmart the microbe, he deserves to lose the carcass to the microbe. I am sorry to admit that too often the microbe wins this race.

Metal Handling Devices

So far as possible all product-handling devices—chutes, troughs—should be made of alloys such as monel metal and stainless steel. Smooth metal surfaces are easily cleaned and it is a simple matter to determine when extraneous materials have been removed. Cutting boards must be thoroughly scrubbed each day with hot water and some detergent such as soda ash or one of the phosphate mixtures. By hot water we mean water at not less than 180 degs. F. Water colder than that is not suitable. The boards are then turned on edge and allowed to drain and dry until put into use the following day.

We have found it possible to lengthen the life of these cutting boards by periodically dusting them heavily, after scrubbing, with dry, powdered soda ash. Leave them for 12 hours or longer, then soak and rinse well with hot water. However, when the scores are deep and slivers are in evidence, the boards should be discarded and new ones substituted. It is profitable to sterilize all equipment with hypochlorite, but one must follow carefully worked out instructions to avoid corrosion and to make sure of the effectiveness of the process. Knife boxes should be drained and scrubbed daily. Product should flow continuously and where such items as glands or other small pieces are collected, small metal containers supplied with ice should be provided so that they can be removed frequently to offal coolers. The cutting floor should be cooled to avoid condensate forming on the fresh pork cuts.

Chill rooms should be adequate and provided with sufficient refrigeration so that crowding may be avoided. Also sufficient overhead space is necessary to allow air circulation, to prevent condensate forming and dropping on the hogs. Unit spray coolers have proved satisfactory where managed properly. The clean-up problem of the killing and cutting floors is much the same as it is in all other departments. The clean-up foreman should be a high quality man and his assistants should not be made up of the marginal men from the lunatic fringe who can't work anywhere else. A set program of cleaning operations should be worked out and set forth in detailed specifications so that there is a general understanding of standard requirements by everyone from the general superintendent to the clean-up foreman.

Quick Handling Essential

Commercial cuts and trimmings are distributed from the pork-cutting floor to the various departments. If cuts are to be frozen they should be properly boxed and sent directly to the sharp freezer. Under no condition should fresh

THREE GENERATIONS

Henry Rottersman (left), president of Advance Oven Co., St. Louis, Mo., poses with his son-in-law, C. K. Dorsey, and his two granddaughters Ann Dorsey, nearest him, and Ayls Dorsey. The photo was taken at the firm's exhibit booth.

pork be held for a few days and then sent to the freezers. I know that such a practice sometimes occurs, but one must remember that he can't expect to get out of the freezer any better grade of materials than he puts into it. Freezers should never be overloaded, and as is well known, the quicker the meat is completely frozen, the better. Good practice sometimes has to give way to expediency. This can't be helped; but it is quite essential that the responsibility be placed where it belongs.

Most meats destined for sausage or canning pass through the boning departments. These departments should not only have all of the care outlined for killing and cutting floors, but should be provided with refrigeration and with readily accessible wash basins, soap, water and towels to encourage frequent washing of the hands.

Administration and supervision has not done its full duty until a state of affairs results where it is easier to perform the tasks assigned in the right way than to do them in the wrong way. There is little profit in taking a foreman to task for not getting things done right if it is easier to do them wrong and difficult to get them done right. Much better to make the easier way, the right way.

The work of the curing cellars has been increasingly mechanized in the last few years. Also the quick cure has helped alleviate the trouble from ham souring. More and more metal boxes are used for curing bacon. Defrosting tanks are now largely of metal. Grading tables, pumping tables and equipment are also of metal. All of these things must be kept scrupulously clean and curing vats require not only scrubbing but should be steamed after each use. Only a good grade of salt should be used for making pickles, and the storage tanks as well as the make-up equipment should be thoroughly cleaned after each use.

Strict Cleaning Schedule

All pickle lines should be blown out at frequent intervals to avoid sour pockets. If the above conditions are maintained and the chill room has been properly managed, there should be little trouble from the cellars. However, it is quite necessary to work out a cleaning schedule to avoid letting things go. Without a strict schedule it is likely that most cellars will have places not touched by human hand, brush, hot water, steam or antiseptic for months at a time. Like the day of rest, the clean-up time should come around with unfailing regularity.

The sausage department deserves special consideration. First, let us consider the meat supply. It is highly important that the trimmings coming to the sausage department be strictly sound. This can only be when they have been produced under the best of conditions. It is well known by every experienced person that no matter how sanitary the sausage department is maintained, if the meats and/or meat by-products are unsound, the manufactured product is likely to be unsound too. It is true that sausage makers have been able under some circumstances to get away with murder in using questionable materials; but in the long run they are playing with strings attached to booby traps. Green rings are much less common now than formerly, but I wish to call your attention to the work of W. Lee Lewis, Jensen, and others, who found that there is a decided predisposition to this kind of spoilage when beef or bull meat has an extra high bacterial population. At times, the organisms may be destroyed in processing but the products of their growth may go into the product and cause a change of color in the meat pigments. It is well, too, to check on the water, spice, ice, milk, flour and all other things which are to enter into or come in contact with the sausage.

It has often been pointed out that sausage makers get their hands into the batter. This is true. Most sausage makers determine the chop more with their hands than with the clock. While it is strongly recommended that the chopping schedule be determined with the thermometer and the clock, it is practically impossible to keep the batter from contact with the hands. In the transfer to the stuffer, the stuffing operation, and especially the linking, hanging and other operations, the sausage will most certainly come into contact with the workers' hands. It is perhaps no worse for hands to come into contact with sausage than for anything else to come in contact with it. The whole question is whether the hands, thermometers, shovels, stuffers and all the rest of it are clean. Workers can be taught to keep their hands clean if wash basins, soap, water and clean towels are readily available. Thermometers and paddles, shovels and other such things may be as bad as the hands unless they are maintained in a state of sanitation.

Handling of Offal

Offal items usually carry a rather heavy load of micro organic life and these items should be handled as carefully as possible. It is impossible to keep trimmings from becoming contaminated. Bacteria-free meats or trimmings would be a curiosity indeed. What, then, can be done since we must admit that it is impossible to have bacteria-free meats to use in sausage making? *We can hold the bacterial load to a minimum.* It is a fact that the degree of contamination is important. When it was found that sugar could not be used in some canning operations because of the high count of thermophilic spores, the sugar mills cleaned up and reduced the load of these spores. Note, they did not eliminate the spores entirely; they reduced their numbers. And where formerly the sugar caused spoilage, it could now be used without

The First OPA-less Convention in Several Years

1. Left to right are Harry Reed, chief of the livestock branch, USDA, Washington, D. C., with E. S. Waterbury, former administrator of the meat set-aside orders, and John T. Turner, of the smoked meat department, Wilson & Co., Chicago.

2. Left to right: H. Beckett, P. E. Andrews, and J. A. Young, general superintendent's office, Armour and Company, Chicago.

3. W. C. Kruger, director of manufacturing for Stokely-Van Camp, Inc., Indianapolis, with W. J. Foell, president, Foell Packing Co., Chicago, Ill.

4. A. P. Carpenter, general manager, and J. J. Fleming, sausage department superintendent, C. A. Durr Packing Co., Inc., Utica, N. Y.

5. Harold Graham of the general superintendent's office, and L. M. Batkiewicz, of the casing sales department, Wilson & Co., Chicago, Ill.

6. Harry J. Williams, vice president, Wilson & Co.; Harold North, vice president, Swift & Company, and Wayne L. Douglas, director of training, Wilson & Co., Chicago.

7. Roy Stone of the AMI with A. F. Faris, manager, and Albert R. Faris, of the Davis Packing Co., Boise, Ida.

8. Carstens Packing Co. representatives: Phillip J. Carstens, assistant manager of the Spokane, Wash., plant, and Thomas Carstens, assistant manager, Tacoma, Wash., plant.

9. Henry D. Tefft, director of packinghouse practice for the AMI, with H. M. Shulman, secretary, Hammond-Standish & Co., Detroit, Mich.

10. M. E. Barnes, general manager, and L. F. Engelhardt, plant superintendent, Armour and Company, Chicago.

11. F. J. Bauer and C. A. May of the casing sales department, Wilson & Co., Inc., Chicago.

12. J. W. Rickord, assistant manager of the quality control department, and J. E. Nelson, animal feeds sales manager, both with Armour and Company, Chicago.

13. C. G. Hegburg, of the public relations department, Swift & Company, Chicago, with Dr. W. H. Lipman, former medical director of the company.

14. R. D. Smith, purchasing agent; H. H. Smith, president, and Harry Pederson, sales manager, A. F. Schwahn & Sons Co., Eau Claire, Wis.

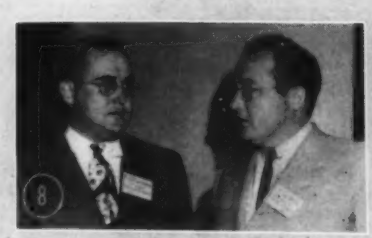
15. K. C. Norton and R. C. Theurer, president, Theurer-Norton Provision Co., Cleveland, O., with Charles Lee of the Central Cooperative Association.

16. J. C. Williams, assistant superintendent of Wilson & Co., with J. R. Jones, provision department manager of Geo. A. Hormel & Co., Austin, Minn.

17. Wilson & Co. representatives included: L. M. Batkiewicz, Syracuse, N. Y., and D. D. Riddle, Chicago office, and N. C. Sapsford, New York office.

18. Oscar Emge, president, Emge Packing Co., Inc., Fort Branch, Ind., with Henry R. Streckert, vice president, H. C. Bohack Co., Brooklyn, N. Y.

EXHI



MEETI

any trouble in canning plant results.

So far as I can learn, it has never been satisfactorily explained why a high inoculum of some organisms will cause trouble and a low inoculum will not. I realize that there are some more or less plausible theories on the subject, but I do not believe bacteriologists agree generally on why this is so. One thing they all agree on is this indisputable fact that for most purposes a low inoculum causes no trouble while a high inoculum does. That fact is sufficient for guidance in production.

A program of clean-up should be worked out which takes into account all materials and tools used in the sausage room. All tables should be made of metal, preferably stainless steel. All floors should be hard and smooth. Personnel should be trained in matters of cleanliness, and abundant and handy supplies of soap, water and towels should be available for their use. Offenses such as picking meat from the floor and returning it to the batch or load should be severely dealt with, and if any individual persists in such offenses he should be given a job elsewhere, where he does not come in contact with edible products, or he should be discharged. The sausage foreman should literally wear out his thermometers. He should be testing everything which can be tested and there should be recording thermometers for all places not readily accessible. Temperature control, temperature control and more temperature control—this is the general order of the day for a properly-managed sausage factory.

Use of Flow Sheet

The bacteriologist can follow operations in the sausage department preferably by the flow sheet method. He can tell what the state of affairs is, or rather was, at the time of his study; but it will perhaps always remain for the supervisor and the foreman to see to it that all details of operation are carried out as directed in specifications. Rule of thumb methods are no longer adequate. Written, approved specifications should be the order of the day. (It is said that the practical man is one who practices all the blunders of his ancestors. The practical sausage man today should be one who practices the manufacturing procedure given in detail in his specifications and does not deviate from them.) Too often the troubles of the sausage maker, like slimes, molds and green surfaces, result from faulty handling after the product leaves his control. For this he cannot reasonably be held to account.

Practically all bacteria isolated in the packinghouse will grow in the condensate on the surface of wieners. When they grow, they usually form slime. Some of the organisms discolor the surface. On the other hand, none of these organisms grow well on dry surfaces of wieners when they are kept reasonably cool. So, all of the conditions leading to slimes and discoloration can be eliminated if dry surfaces are maintained after the sausage is processed and until it goes to the consumer. This is not easy, but it can be done.

Here I wish to bring into the picture a short discussion of the adaptation of organisms to their environment. All organisms, small and large alike, if placed in a new or different environment, must go through a period of adjustment to the new situations before they can go forward and carry on their life processes. In bacteriology it is often necessary to use the technique of enrichment cultures first worked out, I believe, by the great Dutch bacteriologist, Beijerinck, one of the founders of the science. When there was some particular organism in a mixed culture he wanted to isolate, he would try to devise a medium and an environment which would be specially suited to that particular organism. If possible, he would try to make it somewhat detrimental to the other organisms in the mixture. By culturing in this way, the desired organism often overgrows the others and becomes very numerous. In this way, it is sometimes possible to develop a new population of organisms which are peculiarly adapted to a given set of conditions and which can maintain themselves against almost all efforts to remove or destroy them.

Now what has this to do with the bacteriology of packinghouse processes? Just this—unless frequent regular and thorough cleaning of every corner and crevice is carried out, some places may become enrichment cultures for those organisms best suited to living and growing there. Some noxious organisms may be started in this way which will practically overgrow a whole department and become almost impossible to eradicate. This has happened, for example, in cheese factories and other food establishments.

There is a feeling among certain people, usually the poorly informed or the exploiters, that the use of some antiseptic or other can solve all their sanitation problems. Antiseptic preparations are a very fine addition to our list of weapons for war on bacterial contamination; but they are neither the last and final word, nor, I may say, the first and most important word in most cases. In no sense are they a cure-all. They are not a short cut to cleanliness. The meat inspection division has wisely limited the use of antiseptics to a very few substances and to quite restricted conditions in the packinghouse. Hypochlorite is permitted. Lethal rays from ultra-violet lamps may be used under certain conditions. Vinegar, salt, sodium nitrate, sodium nitrite and sugar under specified conditions, may be added to meats. Caustic or Sal soda may be used as well as some of the detergent mixtures and soaps for cleaning equipment. All of these things have their uses but must be applied in strict accordance with specifications.

Cleanliness Most Valuable

There is nothing so valuable for personal cleanliness as frequent and thorough washing of the hands with soap and water. Equipment properly scrubbed with hot water and soap or some detergent seldom gets any particular benefit from subsequent dousing with a chemical solution. If some particular place or some department is known to have become badly contaminated, then a special cleaning with hot water, the scrub brush and finally

Some Families and Friends at the Meeting

1. Left to right are John T. and Mrs. Keene, and Mrs. and Mr. Ed Auge, owner, all of the Ed Auge Packing Co., San Antonio, Tex.

2. Left to right are J. F. Buckley of the AMI's Boston office, Mrs. Buckley, and John J. McKenzie, treasurer, John J. McKenzie Packing Co., Burlington, Vt.

3. Mrs. Hackworth and T. T. Hackworth, president, Florence Packing Co., Florence, Ala.

4. L. L. Duncan, president, Duncan Packing Co., St. Louis, Mo., with his son, Dick Duncan.

5. Mrs. and Clifford L. Case, vice president, Case's Pork Pack Co., Trenton, N.J.

5a. Roy Melchior of Jacob E. Decker & Sons, Mason City, Ia., and Mrs. Melchior.

6. Mrs. H. D. Anderson, purchasing agent for the East Tennessee Packing Co., Knoxville, Tenn., with her sister, Mrs. J. T. Killian.

7. Mrs. and Mr. L. E. Winnett of the sales department, John Morrell & Co.

8. L. B. Harvard, vice president, Georgia Packing Co., Thomasville, Ga., with Mrs. Harvard.

9. Mrs. O. L. Marquesen with Mr. Marquesen, manager of the Geo. A. Hormel & Co. plant at Mitchell, S. D.

10. D. E. and D. O. Nebergall of D. E. Nebergall Meat Co, Albany, Ore.

11. Mrs. Marion C. Hughes, Hughes Provision Co., Cleveland, O., with her son Sam W. Hughes.

12. Mrs. and Mr. William Knehans, Packers Architectural Engineering Co., St. Louis, Mo.

13. F. H. Glaser, jr., Mrs. F. H. Glaser, jr., Fred Glaser, president of Glaser's Provision Co., Inc., and Mrs. Fred Glaser, all of Omaha, Neb.

14. William Greenhouse, vice president, Renee Packing Co., Inc., Syracuse, N.Y., sits between his daughter, Renee (left), and Mrs. Greenhouse for this NP family group portrait.

15. William L. Lavin, vice president, and his son, David J. Lavin, sales representative, Sugardale Provision Co., Canton, O.

16. Mrs. R. F. Kieldsen, Butte, Mont., wife of the AMI northwestern representative, with Eric G. Rohlwing and Lincoln Jones, Los Angeles, both of the AMI staff.

17. Mr. and Mrs. Harry L. Sparks of Harry L. Sparks & Co., order buyers, National Stock Yards, E. St. Louis, Ill.

PROCEEDINGS OF THE ANNUAL MEETING
CONVENTION ISSUE
OF THE AMERICAN HEAT INSTITUTE

a good dosing with an antiseptic is indicated.

The lethal violet rays have been found valuable in some walk-in coolers and to help disinfect the air and hold down surface contamination. They are not by any means a general cure for the many ills of contamination in the packinghouse. Salts of proponic acid have proved valuable in reducing the mold flora on containers and wrapping papers and their use is commendable. Salacylates and benzoates will perhaps find profitable use in some phases of the packing business in the future. D.D.T. has given us a new and potent weapon to do battle with the thousand million flies which daily seek out the packinghouse and stockyards. I believe we may confidently expect the intensive research programs of this and other industries to give us the help we need to maintain satisfactory operating conditions in the packinghouse—if we have the wisdom to learn the new methods and the will to adopt them.

• • •

CHAIRMAN MAXWELL: The next speaker on our program, I feel, is pretty well known to most of our members. I have often wondered if all members presented as many problems to him as our firm, and how he has time to do all his work.

Mr. Henry D. Tefft is director of the Institute's department of packinghouse practice. He had more than 25 years of practical packinghouse experience before his association with the Institute. He began his career in the chemical laboratories of Armour and Company here in Chicago and later took charge of the firm's lard refineries in Kansas City and E. St. Louis. For a number of years, he served as superintendent of Canada Packers in Toronto, Canada. Mr. Tefft has always kept in very close touch with Institute members and has recently returned from an extensive visit to many members' plants, assisting them particularly with their modernization plans. His talk will include the discussion of the objectives to be sought in modernization. It is a pleasure to present Mr. Tefft of the American Meat Institute.

CAMERA SEEING DOUBLE?

Eleanor Suckow, secretary to Vern Schwaegerle, director of the advertising department for the AMI, checked her makeup and obliged the cameraman with this unusual angle shot.

FACTORS TO CONSIDER IN DEVELOPING PLANT IMPROVEMENT PLANS

HENRY D. TEFFT: In 1917 common labor rates were 25c; 30 years later, in 1947, they are $1.02 per hour. Many methods of handling product still in use that were permissible under 1917 conditions are no longer economically sound under 1947 conditions. Business generally has been enjoying a seller's market for a number of years. The situation, however, is changing rapidly to a market where the buyers are becoming discriminatory. Quality of product will determine who survives in such a market. Modernization of plant facilities is essential, therefore, both to guarantee minimum handling costs and to insure the highest quality of product in order to meet the severe competition which lies ahead.

H. D. TEFFT

There are a number of objectives which must be kept in mind in planning a modernization program. One such objective is to reduce product handling costs by providing an orderly flow of product from the receipt of the raw material through the various processing steps to the shipping room. This is not always easy to accomplish, especially when modernizing an old plant where additions have been made to the original plant without much thought for the future. A minimum of transfer of product to different floor levels should be sought and no back-tracking of product.

New Practices Help

Recent changes in processing methods facilitate an orderly flow of product in some instances. In many plants curing operations still are conducted in the basement floors, mainly because this location provided the space needed in the days of long cures and elaborate soak rooms. Modern quick cures have eliminated the need for extensive curing space. Some authorities estimate that less than one-third the space formerly devoted to curing now is required. Furthermore, soaking now is more a washing than a soaking operation and modern revolving smokehouses eliminate the need of special building locations, smokehouse vestibules or alleys and smokehouse elevators. In many a modernization program, it should be possible to locate the curing rooms directly in the line of travel from the cutting rooms to the smokehouse and the shipping rooms. If operations are too extensive for such an arrangement curing can be conducted in cellars with revolving smokehouses so installed that they can be loaded at the basement level and unloaded on the shipping floor level.

The modern practice of stuffing sausage and smoking it at once after the meat has been ground and mixed with curing agents permits straight line of operation in this department also. Modern air conditioned smokehouses with smoke producers and controls, all on the same floor, can be placed directly in the line of travel from the stuffing table to the shipping room.

Product as processed should converge upon the shipping room. This makes floor space adjacent to the shipping room particularly valuable. In the case of a few operations it is possible to locate part of the processing at some distance from the shipping room but do the actual packaging adjacent to this room. An example is the rendering of lard in a location near the boiler room, the source of power, and near the hog killing and cutting departments, the source of the raw material, but the pumping of the rendered lard to space adjacent to the shipping room for packaging.

Any arrangement of departments should provide for future expansion. No department should be so hemmed in that its operations cannot be expanded if that is found desirable at some future date.

Allow for Expansion

A second objective in plant modernization should be the elimination to the greatest extent possible of all rehandling of product. Present labor rates discourage any avoidable rehandling. Every product or supply rehandling operation should be examined to see if it can be eliminated. Consider, for example, the number of times hams were rehandled in 1917 when long cures were used. The hams first were placed in a truck on the cutting floor or chuted to the curing cellar; in the curing cellar they were rehandled for grading, placed in trucks and then taken to the curing vats and pumped and carefully placed in the vats in a special way, overhauled three times, one at a time, from one vat to another. They then were placed a fourth time in a truck, taken to the soaking room, placed one at a time in and out of the soaking vats, washed by hand one at a time, hung on the smokehouse trees one at a time, smoked, taken to the smoked meat handling room and wrapped for shipment as a final handling.

Artery pumping and quick curing automatically eliminated some of these rehandlings but current rehandling can, in many instances, be still further reduced. Many packers are transporting cuts in the curing containers by means of lift, platform or fork trucks from one operation to the next one without removal from the original container. There are a few installations also of specially designed equipment for dumping the hams en masse from a vat to a table feeding the washing line or to another vat when that is necessary. One of our members is considering the use of metal box-shaped curing containers on supports which can be more eas-

ily transported by such trucks than the old-fashioned curing vat.

For many years the industry has been using lift trucks. The use of power driven platform or fork trucks for transporting product on pallets or skids for some of the operations previously handled by these lift trucks has been growing but they should be used even more extensively. Such trucks move product faster and increase the size of unit loads. One of the industry's trade magazines stated in an article recently that in a Chicago establishment one fork truck is employed in moving cured meats from the pickle pumping room to the curing cellar and from the curing cellar to an elevator serving the wash room at the rate of 200,000 lbs. per man day.

There are many products customarily rehandled several times, the movement of which could be simplified by the use of these types of trucks and pallets or skids. Examples are lard, canned goods, bagged product such as blood and ground digester tankage and ground meat and bone scrap, particularly when these products are shipped in carload lots. Perhaps some of the rehandling of hides when being loaded could be eliminated. Many incoming supplies and goods can be loaded from a car or truck directly upon skids or pallets and left upon them in storage and then transferred upon them when wanted later for shipment or use.

The question of how to handle packaging supplies should be given careful consideration in any modernization program. Should they be stored in a central warehouse or should these supplies be delivered directly to the department where they are to be used? The answer to this question depends upon local conditions and is not the same in all cases.

In anticipation of the use of fork and platform trucks, changes in building design should be included in any modernization program. Floors must be designed for loads up to 250 lbs. or even 300 lbs. per square foot. Elevators should have a 10,000-lb. capacity. Door openings must be large enough to allow easy passage of fully loaded trucks and should be equipped with opening and closing devices which can be actuated by the truck operators. Aisles must be wide enough to permit operation of the trucks and loading docks should be wide enough to eliminate traffic jams. Longer spans are desirable in storage rooms.

A CROSS-COUNTRY ROUNDUP OF PACKER EXECUTIVES

Exchanging greetings in the registration lobby just before meeting time were (left to right): T. Carstens, assistant manager, Carstens Packing Co., Tacoma, Wash.; Henry L. Coffin, president, Gibson Packing Co., Yakima, Wash.; J. H. McCall, vice president, J. H. Allison & Co., Chattanooga, Tenn.; G. A. Schmidt, chairman of the board, Stahl-Meyer, Inc., New York City; R. A. Rath, president, Rath Packing Co., Waterloo, Ia.; K. J. Maxwell, president, Carstens Packing Co., and A. D. White of the American Meat Institute.

A FLOWER FOR YOUR LAPEL, MR. MEAT PACKER?

Two girl representatives of the Florists' Telegraph Delivery Association can be seen here passing out lapel flowers to conventioneers as they move towards the assembly hall for Wednesday morning's session. The flower group held its convention at the Stevens hotel during the same period as the AMI meeting and was responsible for the floral decorations at the annual banquet.

Capacity of many presently installed elevators is quite a handicap to the immediate use of platform and fork trucks. In some instances this obstacle can be overcome by loading an elevator with a truck at one floor level and removing the load with a second truck at another floor level. Portable floor roller conveyors can be used for moving skids on and off elevators. Many of our plants, however, are in essence single floor plants, and in these plants the size of the elevators is not a serious handicap to truck use.

Vertical Movement Expensive

As mentioned before, vertical movement of product between floors should be reduced to a minimum. Some years ago, Mr. Henschien, in a discussion of one-story packing plants, called attention to the fact that it is more economical and time-saving to move goods on a horizontal line than to move them vertically. When goods are moved vertically by elevator there must also be a horizontal movement to and from the elevator. This double movement is both costly and time consuming. He cited test figures showing that it cost about six times as much to handle product by elevator as horizontally by trucks.

There are many examples of elimination of material rehandling in a minor way. It is rather standard practice to make brine at the point where cars of salt are unloaded and then to pump the brine to the point of use, thus eliminating any rehandling of the salt itself. Pak-Ice and Flak-Ice equipment located in the sausage room eliminates the rehandling necessary if cake ice is used for cooling meat in the silent cutter.

The sausage department is one de-

partment which offers a challenge to the elimination and simplification of product handling.

A third objective in plant modernization should be to make the maximum use of floor space so as to have all operations consolidated to the greatest extent possible and thus minimize the distances through which product must be moved. In other words, make a plant as compact as possible. An example of this might be the stacking of dry cure bacon boxes to increase the use of floor space. It is difficult and laborious to double deck these boxes by hand. It is easy to stack them with a fork truck. An investment in a fork truck might be less in some cases than investment in doubling or tripling the curing floor space. It might make easier the location of the curing operation directly in the line of travel from curing room to shipping room. Furthermore, use of a fork truck makes practical the packing of all curing boxes at a central point with convenient mechanical means provided for closing the boxes.

There are many examples of how floor space and movement of product has been conserved in the past by improved methods. Fresh cleaning of hog casings has eliminated the space used for fermenting casings by the old method and the laborious handling of the casings in and out of the tierces used for this purpose. Intensifying the chilling of hog carcasses has cut the space assigned to this operation. Similar intensification of freezing operations has accomplished saving in floor space. One member reports that freezing in a blast of cold air enables him to freeze product in 24 hours which formerly required 36 hours. Similarly, blast chilling of product such as livers and hearts has saved space, lessened shrink and at the same time improved the product. The new Pak and Flak-Ice making equipment takes less space than the old ice tanks and can be more conveniently located. Modern ammonia compressors require much less space than the older equipment.

Other Space Savings

Space formerly used for smoke pits can now be used for other purposes when modern smokehouses are installed. Bacon slicing equipment recently placed upon the market greatly increases the amount of product that can be handled in a given area. Centrifuges have saved space devoted to the settlings of solids in liquids. It should be possible, in the future, to conserve further floor space in other operations. In any event, if the capacity of any operation must be increased, the first step is to see if it can be so speeded up as to be handled in the same area currently being used, or whether the production can be handled in some other manner so as to conserve space.

Just for an example. The facilities of the rendering department may be taxed to capacity, yet the installation of a good-sized blow tank may provide enough reserve holding space for the raw fat so that a sufficient increase in production can be obtained from the installed rendering equipment. The capital investment will be much less.

A fourth objective in plant modernization should be improved working conditions, such as the inclusion of adequate and pleasant dressing rooms, showers and sanitary facilities for the employes so as to attract to the industry as high a type of labor as our current wage scales deserve. In 1939, the industry ranked ninth in actual average weekly earnings. By 1947, it had advanced to fifth place. However, we still suffer from the odium associated with the old country slaughterhouse. Some material for an encyclopedia submitted to the Institute for review not so long ago was classified under the heading "slaughterhouse." Even though we cannot compete with industries such as electrical equipment for desirability of working conditions, still we can do much to eliminate hot steamy rooms; we can provide rooms well lighted and ventilated and we can provide also adequate facilities for bathing after work and for changing from work to street clothing. A good cafeteria is another attraction. Many packers have made such provisions. I believe these packers feel that the money spent in this way has been a good investment.

Insure Operating Safety

A fifth objective should be to insure safety in plant operations. Special attention should be paid to the type of flooring installed. There is no perfect floor, but there are methods of reducing slipping hazards in those areas where the working conditions make any type of floor slippery. All machinery should have adequate working space about it. Conveyors should be well guarded. Safety rail switches should be used. Elevators should be equipped with safety devices. Motors should be protected from contact with water. Stairways should be provided with proper treads and hand rails and should be well lighted. Any money devoted to safety features will bring returns in due time to everyone, management and men alike.

Sanitation Pays

A sixth objective in plant modernization is sanitation. You already have heard from one speaker on this subject but I should like to reiterate briefly the importance of the use of wall materials which are easily cleaned, of corrosion resistant metals wherever possible and of adequate rat proofing. Special attention should be paid to the selection of refrigeration methods which will insure dry walls and ceilings. Elimination of fly breeding conditions such as paunch manure handling should be kept in mind. Sanitation pays dividends.

Any modernization program should include careful consideration of the newest developments in equipment. As has been mentioned before, the selection of proper and adequate refrigeration equipment is especially important. Low humidities and high air circulation will result in excessive shrinkage of product. On the other hand, too high humidity and inadequate air circulation will foster mold, slime and discoloration.

No packinghouse product will retain a pleasing appearance if exposed to alternating low and high temperature. Under such conditions films of moisture form on the surface of the product and provide an ideal environment for the growth of mold and of slime organisms.

Some departments should be moderately refrigerated just to minimize

And How Are Your Hogs Cutting Out These Days?

1. David Saylor, manager, Luer Bros. Packing Co., Alton, Ill.

2. Left to right are C. F. Jeffords, superintendent of the Chesaning, Mich., plant of G. M. Peet Packing Co., with H. D. Peet, president, and T. O. Jones, vice president of G. M. Peet Packing Co.

3. D. J. Holman, president, Fort Worth Dressed Beef Co., Fort Worth, Tex., smiles for the NP photographer.

4. F. C. Marolf, president, Marolf & Co., Seattle, Wash.

5. D. M. Sinclair, P. F. Lyons and J. Edgar, industrial engineers with Wilson & Co., Chicago.

6. E. L. Mason, Ever Ready Maintenance & Engineering Co., with K. E. Wolcott, refrigeration engineer, Wilson & Co., Chicago.

7. A. Roy Greene, president; Everett C. Moore, vice president, and R. F. Childs, sales manager, Kleeman Packing Co., Clarksville, Tenn.

8. Lester Bookey, secretary, and Louis Hanrahan, promotion manager, Bookey Packing Co., Des Moines, Ia.

9. K. R. Haynie, chief industrial engineer, and B. Trahan, Wilson & Co., Chicago.

10. Harry Alexenberg, sales manager, Wilmington Provision Co., Wilmington, Del.; E. E. Schwitzke, secretary, Trunz, Inc., Brooklyn, N. Y., and J. Goldberg, Food Fair Stores, Philadelphia, Pa.

11. J. C. Jacobs, retired Armour and Company casing expert.

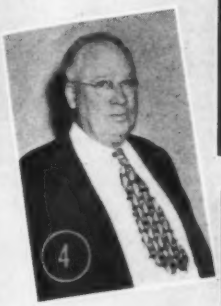
12. J. J. Mitchell and W. O. McMahon, branch house department, Swift & Company, Chicago, Ill.

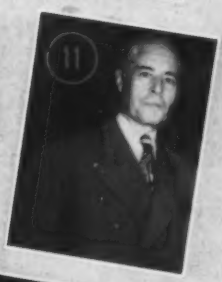
13. H. H. Meyer, president, H. H. Meyer Packing Co., Cincinnati, O., and H. L. Cooper, sales manager, Tobin Packing Co., Rochester, N. Y.

14. O. G. Myhrman, superintendent, Elliott & Co., Duluth, Minn.

15. W. C. Kruger, director of manufacturing for Stokely-Van Camp, Indianapolis, Ind.; C. W. Becker, vice president, and N. M. Adams, assistant to the vice president, Wilson & Co., Chicago.

16. R. Van Vranken of the Michigan Livestock Feeders Association, Lansing, with Aled P. Davies, of the AMI, and J. W. Coverdale, public relations department, Rath Packing Co., Waterloo, Ia.





the condensation of moisture on the surface of cold product. Examples are hog cutting, beef boning and loading dock.

Plant modernization should provide for exposure of product to as uniform temperature conditions as possible once it has reached its finished form and from there through the packaging and loading operations and even to its delivery to the customers. The latter can be accomplished through more extensive use of adequately refrigerated trucks.

Adequate refrigeration should be provided for hot carcass coolers. Members frequently point to the temperature registered on the thermometers in these rooms as proof positive that the refrigeration is adequate. They seem to forget that the temperature of the carcasses in the cooler is what they should be interested in.

There have been some recent developments which will merit watching and appraising when considering the selection of equipment in a modernization program. One of these is the installation of a cold water dip for hogs prior to placing them in the scalding tub. Use of the cold water dip seems to give excellent dehairing results. On the West Coast I have seen installations of finned coil refrigeration units in hot carcass coolers which it is claimed are giving good results. One noticeable result of this type of refrigeration is the lack of rust on the rails. Some form of brining hides is being used in many new installations.

Uniform Temperature

Plant modernization should include installation of temperature control devices which will insure that product processing will be uniformly conducted along specified lines. Examples are smoking and dry rendering. Recording thermometers are better than indicating thermometers when they are used for control purposes because they provide an accurate record for the supervisor to check.

In no department is temperature control more important than in the sausage department. Raw material for sausage should be kept at low temperature right up to the time it is to be placed in the silent cutter or is ready to be placed in the stuffer. This calls for the location of hashers and mixers in a cooler in any plant modernization program.

In connection with plant modernization, search should be made for new means to minimize the labor now connected with many operations such as skinning wieners. The help of equipment manufacturers should be solicited. They have been successful in helping the industry in the past. I want to cite two instances in particular and to remind you of the progress which has been made since lard was first filled into one-pound cartons and since bacon began to be marketed in sliced form. Automatic carton folding and closing equipment and automatic lard fillers have cut the cost of filling one-pound lard cartons very substantially to the point where a gang of three people can handle 3,600 lbs. an hour. Bacon formers, modern slicers and automatic shingling conveyors have made a similar substantial cut in the cost of slicing bacon. Bacon formers alone have cut the cost to one-half that of the forming methods first used. It should be possible to make similar savings in many other operations.

The industry needs a mechanical skinner for removing skins from calves and hides from cattle. It needs a better device for cutting back fat layers for meat loaves. We need a cube fat cutter of larger capacity than present equipment. Perhaps an easier method might be devised for lugging beef quarters into a car. You can probably think of many other packinghouse operations that can be improved.

As mentioned before, the question of product improvement must be kept in mind in connection with any plant modernization program, particularly where our product comes into direct competition with other food products as in the case with lard. Deodorization of lard seems to be the trend today. Work is being done to develop deodorizing equipment practical for small scale production. This development should be kept in mind in any plant modernization program.

As a final check on quality, control provision should be made for laboratory facilities wherever the volume of production warrants it. Otherwise arrangements should be made for control work to be performed regularly by some outside laboratory such as the Institute's service laboratory. Some form of laboratory control is almost a "must" for packing plants no matter what their size.

It hardly seems necessary to add that plant modernization should include construction methods and equipment to insure proper fire protection for plant and property and to guarantee minimum insurance rates.

Proper handling of packinghouse effluent should be given consideration in any plant modernization program. State authorities everywhere are enforcing regulations for preventing the pollution of streams. Municipal authorities frequently require preliminary treatment of packinghouse effluent before receiving it in their sewage disposal plants. Packers can do much to minimize their troubles in this direction by corrective measures which will prevent unwanted material from ever reaching their sewers. Installation of departmental catch

KEEPING COOL IS THEIR BIG RESPONSIBILITY

Members of the Institute refrigerating committee held their technical meeting on Tuesday morning in one of the third floor dining rooms. Henry Tefft, director of packinghouse practice for the AMI, conducted the meeting. Chairman of the committee is J. P. McShane of Swift & Company, Chicago.

HOT OFF THE TICKER

The operator shown here kept busy at the American Meat Institute sausage booth in the exhibit hall punching out late news releases which were flashed on a moving sign above the sausage display cases. An International News Service teletype kept her supplied with fresh material.

basins and screening floor drain inlets are two examples.

I have a number of slides and a short moving picture to show as a result of the courtesy and assistance of the Mercury Mfg. Co., the Elwell-Parker Electric Co., the Automatic Transportation Co., The National Provisioner, Abraham Bros., the Allbright-Nell Co., and the

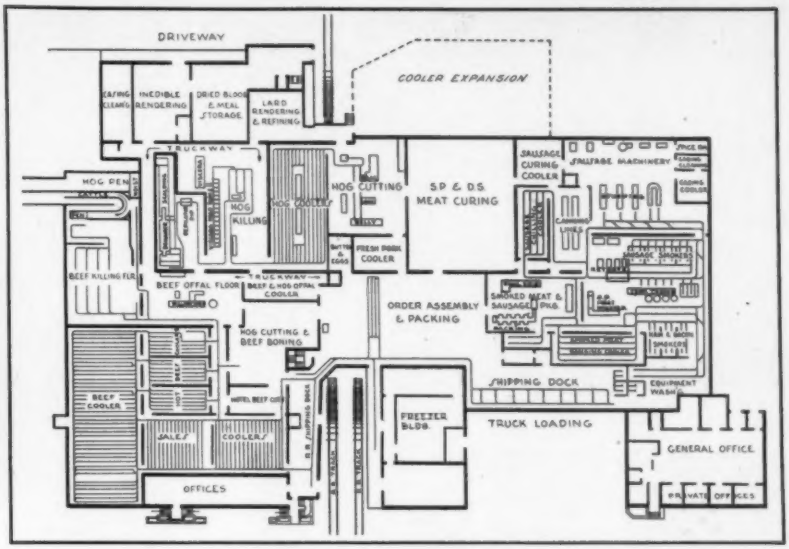
SLIDE 2: PILING BARRELS

Alford Refrigerated Warehouses.

The first slide shows a plant layout

SLIDE 4: PILING BOXES

which illustrates an orderly flow of product converging on the shipping room and with provisions for future enlargement of the plant facilities.



SLIDE 1: PRODUCT FLOW CONVERGES ON SHIPPING DOCK

The next slides, numbers 2, 3, 4 and 5 illustrate the method of piling cartons, bags, vats and barrels by means of fork

SLIDE 5: STACKING VATS

trucks and pallets. The advantages derived from this method are better utilization of space and greater ease of handling.

The sixth slide compares the handling of loads manually with a lift truck and the handling by means of a power truck.

The next three, numbers 7, 8, and 9 slides, show the handling of vats by

SLIDE 7: MOVING VATS

fork and platform trucks. Note the different methods of supporting the vats to provide space for the forks.

Slide 10 shows the vats at the end of the pumping conveyor ready to receive the hams. Hose is filling lower vat with brine.

Slide 11 shows the vat on the way to

SLIDE NO. 3 (LEFT) AND SLIDE NO. 6

SLIDE 8: LIFTING VAT

the curing room on Elwell-Parker truck.

Slides 12 and 13 show the curing vats being double-decked with two different types of trucks performing the job.

The next two slides, numbers 14 and 15, show in operation a specially designed unit for dumping vats.

Slide 16 shows the dumping unit in operation. This takes the place of the usual hand overhauling from one vat to another.

The next slide, 17, shows the dumping unit discharging bellies upon a conveyor unit on their way to the smokehouse. Use of the dumper cuts the cost to 70 per cent of the former method of handling.

The next two slides, numbers 18 and 19, show a method of handling quarters of beef in and out of a freezer and the number of operations which this method has eliminated. The user of this system estimates that it takes about one-third the manhours required by previous methods.

It may seem inconsistent to raise the question whether it is desirable to proceed with a modernization program at the present time after having just stressed the necessity for such a program. Nevertheless, that question is uppermost in the minds of many of our

SLIDE 12: DOUBLE DECKING

members because of the current high cost of construction and the shortage of much equipment and of many construction materials necessary for building.

SLIDE 13: DOUBLE DECKING

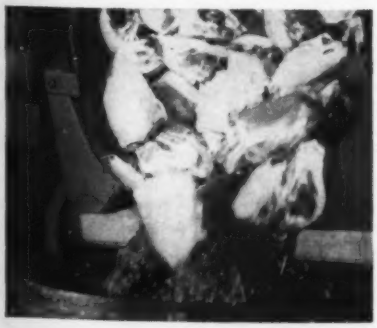
It seems to me the decision to be made depends to some extent upon the objectives of the modernization in each case. Modernization to remedy obsolescence and maintain quality of product is, of course, a must no matter what the cost. If the prime objective, however, is the reduction of operating costs, it should be possible to estimate the savings resulting from the program,

SLIDE 9 (LEFT), SLIDE 10 (BELOW) AT END OF PUMPING LINE AND SLIDE 11 (RIGHT)

SLIDE 14: VAT DUMPER

and then to determine how quickly the cost of the program can be recovered. If the equipment, construction materials and necessary labor are available, the

SLIDE 15: ANOTHER VIEW



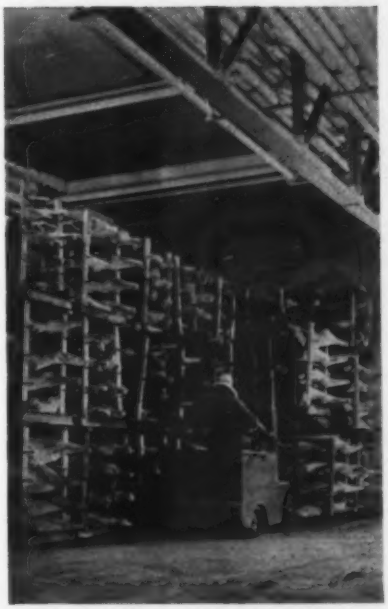
SLIDE 16: QUICK OVERHAUL

SLIDE 17: DISCHARGE TO CONVEYOR

cost of the program may be recoverable long before any foreseeable reduction in construction costs. In such a case, a company might lose more by delaying the program than by proceeding with it at once.

A canvass of well-posted men in the industry indicates rather general agreement that construction costs now will be 70 to 100 per cent over the 1939–41 period; material costs are 30 per cent higher and output of construction labor 50 per cent less. Up to quite recently, serious supply bottlenecks were reported for steel, cast iron and sewer pipe, structural and reinforcing steel, and some timber and electrical supplies, and supplies obtainable were reported not always equal to prewar standards; some construction help such as bricklayers, plumbers and carpenters were reported hard to obtain in many localities. Just recently, this situation seems to have become better. I understand contractors in some areas now are offering firm bids for erection of buildings so that it is possible to know in advance just what a building program is to cost. Equipment deliveries, however, are still very slow.

It is hard to forecast whether building costs will change in the near future. Some of our members who have assured themselves of construction supplies and labor are going ahead with those programs which they consider absolutely necessary on the assumption that costs will not be lower in the near future and even may be higher. Others are refraining from building until what is to happen in the future seems clearer.



SLIDE 18: FROZEN BEEF

CHAIRMAN MAXWELL: The next on our program, I feel, is one of the highlights of the annual meeting. To those who have served 50 years in the meat packing industry, the Institute presents its gold service button awards each year. These presentations were begun in 1920 and have become a tradition in the industry. Mr. S. Edgar Danahy, who will make the presentations, is a member of the board of directors of the American Meat Institute and is head of the Danahy Packing Co. I take pleasure in turning this meeting over to Mr. Danahy at this time.

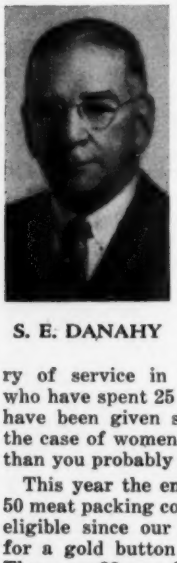
Before I do so, however, I wish to point out that these veterans we honor today have seen many great changes in our industry in their half century of service. During those years have come many advances in refrigeration, operating methods, curing, packaging and

SLIDE 19: LOADING CARS

distribution that have made us the foremost food industry. I know that they will all want to stay around to see what happens to meat packing in the next 50 years.

50-YEAR VETERANS HONORED

S. EDGAR DANAHY: This morning it is my pleasure to participate in a brief interlude from the business sessions of this annual meeting. More than a quarter of a century ago the Institute initiated—and continued to find a place on its successive annual meeting programs for the honoring of men and women each year who dedicated 50 and 25 years of their lives to the meat packing industry.



S. E. DANAHY

For 27 years the Institute has awarded a gold button to those who have accumulated half a century of service in the industry. Those who have spent 25 years in the industry have been given silver buttons. Or, in the case of women—and there are more than you probably suspect—a silver pin.

This year the employes of more than 50 meat packing companies have become eligible since our last annual meeting for a gold button or a silver emblem. There are 38 men from 15 separate companies who have spent 50 years of their lives in the service of our industry. There are 2,037 men and women who are eligible this year for silver emblems.

While it is true that some companies like to honor their employes during the year when they have accumulated either 50 or 25 years of service, the Institute also enjoys honoring them publicly at its annual convention each year.

Unfortunately, only four of the 38 gold button men were able to be present this morning. The son of another 50-year veteran, Harry D. Oppenheimer, who is in Europe at the present time, will accept the gold button for his father. As I read the names of these gentlemen, will they please come forward: Mr. Nicholas Rabig of Wilson & Co., Chicago; Mr. Charles Woodrow, also of Wilson & Co., Chicago; Mr. August Goebel and Mr. Joseph Kappel of the Sieloff Packing Co., St. Louis, and Mr. Edward Oppenheimer.

Mr. Danahy then presented gold buttons to Messrs. Rabig, Woodrow, Goebel and Kappel and to Mr. Edward Oppenheimer, on behalf of his father.

Brief biographical sketches of these men, and other veterans who have become eligible for the award since the Institute's last annual meeting, follow.

W. Brettschneider, Armour and Company, Baltimore, Md. — Mr. Brettschneider began in the packing business in 1895 with his father. In 1911 he went to work for Swift & Company, a year later transferring to Jones & Lamb Co. From 1913 to 1936 he was again employed by Swift and then for two years with Consolidated Beef Co. From 1938 to the present he has been with Armour at Baltimore.

E. Burmeister, Danahy Packing Co., Buffalo, N. Y.—His service to the meat packing industry began in 1896 with the Klinck Packing Co. For a number of years he has been with Danahy Packing Co.

Phil Chelstrom, Swift & Company, Chicago.—Mr. Chelstrom began his service in 1897 with Swift in Chicago. After serving as office boy and messenger he was transferred to various markets in the Chicago area where he served as clerk, cashier and salesman. He served for a time as sales manager of the Swift Forest Park, Ill. office, returning to general selling work in 1932. Five years ago he was transferred to the advertising department as accountant.

L. E. Cornell, Armour and Company, New York, N. Y.—Mr. Cornell was employed in 1898 by Morris and Co., which was later taken over by Armour. At present he is manager of the Armour branch house at 54 Tenth ave., N. Y. He will retire from active service November 1 of this year.

F. Engel, Armour and Company, Baltimore, Md.—Mr. Engel's first experience in the industry was as a meat cutter for Joe Smith from 1893 to 1896. For the next four years he was employed by the Baltimore Butcher Abattoir, and from 1900 to 1905 he was with Charles Lidecker. From 1905 to 1936 he was employed by Greenwald, and from 1936 to date he has been with Armour.

Felix Gehrmann, Reliable Packing Co., Chicago, Ill.—Mr. Gehrmann, now a vice president of Reliable Packing Co., started in the industry in 1886 as an employe of the Anglo American Packing Co. In 1900 he went into the livestock commission business and in 1922 became one of the founders and vice president of Reliable. He has a total of almost 61 years service.

August Goebel, Sieloff Packing Co., St. Louis, Mo.—Born in Germany, he learned the butcher trade and sausage business there. He came to the United States in 1905 and from that year until 1920 was with J. H. Belz Provision Co., St. Louis, Mo. in the sausage manufacturing and curing department, then with the Heil Packing Co., St. Louis, the Becker Provision Co., Little Rock, Ark., and from 1931 to the present time with the Sieloff Packing Co.

Fred Greenwood, Swift & Company, El Paso, Tex.—Mr. Greenwood started with Swift in E. St. Louis in 1896. He worked for a time for the Peyton Packing Co., El Paso, and for Morris & Co., but since 1919 has been with Swift at El Paso.

Ed Hardy, Armour and Company, Kansas City, Kans.—Mr. Hardy began as a door boy early in 1897 and in October of that year was transferred to the sheep kill department. He has worked in the kill and carcass coolers ever since, and at present is a calf skinner.

George L. Heil, Heil Packing Co., St. Louis, Mo.—Mr. Heil, who is president of the Heil Packing Co., has concen-

VETERANS RECEIVE AMI SERVICE AWARDS

Nicholas Rabig (second from left) and Charles Woodrow, both of Wilson & Co., wait with Edward H. Oppenheimer to receive 50-year pins. Oppenheimer accepted the presentation on behalf of his father, H. D. Oppenheimer, president, Oppenheimer Casing Co., Chicago, who is on a tour of Europe. S. Edgar Danahy is at rostrum.

trated his entire life's work to the packing industry. At the age of 13 he went to work for his father, the late Charles P. Heil, who, after coming to this country from Germany, started his own packing firm, the Charles P. Heil Pork Packers, in St. Louis. When Mr. Heil, sr., sold his plant in 1903, his son established his own company in St. Louis, and at present is still actively engaged in directing its affairs. His son, George, jr., is vice president and treasurer of the firm, and his brother, Charles W. Heil, and son, Charles W. Heil, jr., are also associated with him.

James W. Innis, Armour and Company, Newburgh, N. Y.—He has been with Armour for the past 27 years, most of that time as a meat cutter. Prior to his service with Armour he operated a meat market for 12 years at Orange Lake, N. Y., which he had inherited from an uncle, for whom he had worked the 12 years previously.

Leo Jagerberger, Kingan & Co., Indianapolis, Ind.—At present Mr. Jagerberger is in charge of smoking hams and bacon in the company's New York branch. He has spent 30 years with Kingan, 17 years with Wilson & Co., four years with Adolph Gobel and nine years in the retail meat business. He was born in Austria in 1877. During his leisure hours, he enjoys smoking his pipe and playing pinochle.

Oscar W. Johnson, John Morrell & Co., Ottumwa, Ia.—Mr. Johnson began with Morrell in 1897 at 12 years of age. His entire experience has been in the hog killing and cutting division. Starting in the trimming room, he worked practically every job on the hog killing floor. In 1911 he was made foreman of that department and in 1941 was transferred as foreman of the pork cutting department.

Joseph Kappel, Sieloff Packing Co., St. Louis, Mo.—Born in Bernstein, Austria, he came to the United States in 1896 and went to work in the sausage department of the J. H. Belz Provision Co., St. Louis. He served several years as foreman of the sausage department of the Carondolet Packing Co., later at Sokolik Packing Co. and then as foreman of the sausage department at J. H. Belz Provision Co. He next spent two years in the sausage kitchen of Wollmerhauser. Since 1942 he has been in the sausage kitchen at the Sieloff Packing Co.

Mr. Kreutzbender, Jacob E. Decker & Sons, Mason City, Ia.—He began work for John Morrell & Co. in Ottumwa, Ia. in 1885 at the age of 11. He worked in the trimming department, smokehouse, hog cut and the cooper shop. In 1913 he went to Mason City and started with Jacob E. Decker & Sons, where he has been employed ever since.

Albert Kunzer, Heil Packing Co., St. Louis, Mo.—Mr. Kunzer was born in Germany in 1875. When he was 17 years of age he came to the United States and he went to work for the Gerber Meat Co., St. Louis, and later joined the Charles P. Heil organization. When that plant was sold he went to work for the Heil Packing Co., remaining until his retirement in July 1944.

Walter Melquist, Rath Packing Co., Waterloo, Ia.—Mr. Melquist was employed from 1896 to 1910 in the hog cutting department of John Morrell & Co., Ottumwa, Ia. and in the Morrell plant at Sioux Falls for the following six years. He then served two years with the Ogden Packing Co., Ogden, U. as foreman of the hog kill and cut department, returning to Morrell at Sioux Falls in 1918. He later was with Moran Packing Co., San Francisco; Oscar Mayer & Co., Madison, Wis., and from 1930 to the present in the hog cut department at Rath.

Herman Meyers, Armour and Company, Kansas City, Kans.—He started in 1893 at the Jacob Dold Packing Co. as sausage room linker. In 1900 he went to work in the hog casing room at Fowlers, and several years later went to Armour and Company in the casing department.

John Mikulecky, Wilson & Co., Inc., Cedar Rapids, Ia.—Fifty years ago Mr. Mikulecky went to work in the lard refinery of the T. M. Sinclair & Co., Cedar Rapids, at the age of 16. He has worked continuously in the same department since. He was born in Czechoslovakia but moved to this country at an early age. Mr. Mikulecky is a member of the C. S. P. S. Lodge, a Bohemian organization, a member of Odd Fellows and a charter member of the American Federation of Musicians.

E. MURPHY

Eugene Murphy, of Wilson & Co., Inc., Wichita, Kans.—At the age of 12 he went to work in the poultry house of Gene Hurst & Co., Fort Scott, Kans. In 1904 he began work for Swift & Co., Wichita; he later worked for Aaron & Co. there and then Armour and Company, before joining Wilson & Co., which he has served for many years.

John Neuner, Danahy Packing Co., Buffalo, N. Y.—Mr. Neuner started to work for the meat industry in 1897 for the Dold Packing Co. His service has been continuous since that time.

F. W. Pratt, Wilson & Co., Inc., New York.—Mr. Pratt was graduated from Burdett college in 1896 and began his career in the packing industry the next May. He entered the employ of the S & S Co. in 1902 and remained with the firm during several reorganizations, continuing with Wilson & Co. until the present time. He is assistant manager

F. W. PRATT

N. RABIG

of the New York district. Himself an accomplished pianist, Mr. Pratt is very proud of the outstanding talent of his son, Wilmot, who is an accomplished organist and who has played the famous carillon at the University of Chicago.

Nicholas Rabig, Wilson & Co., Inc., Chicago.—Mr. Rabig got his start in the industry 50 years ago as messenger boy for the general superintendent of Swift & Company, at the age of 13. In 1909 he joined Swartschild & Sulzberger. He has been employed continuously at Wilson since the company was formed and is now head of the branch house department. Mr. Rabig's main hobby is baseball.

Herman F. Schmidt, New York Butchers Dressed Meat Co., New York.—Mr. Schmidt began in the wholesale meat industry with his father at the age of 13. He was employed by the St. Louis Dressed Beef and Provision Co. from 1894 to the time it was sold to the

THREE FROM THE WEST COAST

Caught by the cameraman during an early tour of the exhibit of packinghouse equipment and supplies are B. W. Campton, president of Meat Packers Incorporated, Los Angeles, Cal.; Mrs. A. C. Grundman and A. C. Grundman, vice president of the Coast Packing Co. which is also located at Los Angeles, Cal.

National Packing Co. He continued with National as branch house manager until it was taken over by Swift & Company, and remained with Swift until 1920, having been transferred to New York in 1913. He was associated with the Cudahy Packing Co. during 1921 and 1922, then with Armour and Company from 1923 to the present, at Morris & Co., Newark; Atlantic Hotel Supply Co., and New York Butchers Dressed Meat Co.

F. Schroeder, Armour and Company, Baltimore, Md.—From 1892 to 1903 he was employed in the pork cutting department for John Hansan, and since 1903 he has been with Armour and Company.

Joseph Sobocinski, Cudahy Bros. Co., Cudahy, Wis.—He went to work for Cudahy Bros. Co. at the age of 13. He was interested in livestock and chose to work in the stockyards, where he has been ever since. He has performed all duties connected with the operation of the yards and has been supervisor of the yards for many years.

Robert C. J. Stephenson, Hunter Packing Co., E. St. Louis, Ill.—In 1896 Mr. Stephenson entered the employ of Morris & Co. as a door tender, was soon transferred to the pork cutting department. In 1909 he began work for Swift & Company, in the pork cutting and trimming department. In 1917 he joined Armour and Company and worked in the pork cutting department until 1942, when he joined Hunter Packing Co. He is employed in the pork cutting department as a picnic trimmer.

W. E. Stone, Rath Packing Co., Los Angeles, Calif.—Mr. Stone is a salesman for Rath at Los Angeles. His career in the industry includes approximately 17 years with Armour and Company, two years with National Packing Co. and the last 30 years with Rath Packing Co.

J. J. WALSH

James J. Walsh, Wilson & Co., Inc., Los Angeles.—Mr. Walsh began his career in the industry in 1893 with the Charles S. Hardy Packing Co., San Diego. Shortly after that he moved to Los Angeles and entered the employ of Wilson & Co. He is foreman of the beef kill department at the Los Angeles plant.

William F. Williams, Swift & Company, Philadelphia, Pa.—His first job in the industry was as a stenographer, his present occupation, and in the early days he served also as a billing clerk and telephone salesman. Mr. Williams takes an active interest in Masonic work and is a Past Master of his lodge.

Charles Woodrow, Wilson & Co., Inc., Chicago.—At the age of 15 Mr. Woodrow went to work for the U. S. Y. & T. as a messenger. He remained with this company 15 years and then joined the National Packing Co. in New York, where he stayed four years. He went to work for the S. & S. Co. in 1911, and continued with the new firm of Wilson & Co., Inc. He is a foreman in the livestock department at Chicago.

CONVENTION FLASHES

One of the proudest men at the Convention was **A. F. Versen,** executive secretary, St. Louis Local Meat Packers Association. Officials of two of the firms belonging to that group are the elected heads of the two national industry associations—Wm. G. Mueller, jr., president of American Packing Co., is president of NIMPA, and John F. Krey, vice president, Krey Packing Co., is chairman of the board of the AMI.

Albert A. Pincus & Sons, Inc., Philadelphia, expects to occupy a new sausage kitchen on about December 1, according to **Milton H. Pincus,** secretary.

Since his release from the Navy a year ago **Wm. G. Mueller,** III, American Packing Co., St. Louis, has been serving an apprenticeship as a livestock buyer.

The annual sales meeting of the Wilson & Co. casing sales department under **Al Wilson** was turned this year into a casing division meeting with men attending from the producing plants and from the Chicago office. The meeting clarified some of the problems peculiar to the plants, the salesmen and the general office.

John W. Worzniak, manager, Kowalski Sausage Co., Inc., Detroit, states the plant's sausage smoker has experienced difficulty in adjusting his working schedule to a new Lipton smoke unit. After 15 years of constant attention to his sawdust fires, he has found the negligible attention demanded by the new unit unbelievable. From habit he'd build fires and bank them with sawdust, although the unit was producing all the necessary smoke. However, he has now accepted the invention with its greater possibilities for actual smokehouse attention and lighter work load.

D. O. Negergall, D. E. Nebergall Meat Co., Albany, Oregon states the firm has been forced to discontinue its hog operations because of a serious shrinkage of supplies. Recently one farmer from whom the firm has purchased hundreds of hogs annually came to the plant to buy a slab of bacon. He didn't have a hog on the farm he could butcher for his personal use.

Thomas O'Sullivan, proprietor, O'Sullivan Bros., Sydney, Australia, flew in by plane to attend the convention. He is expanding his present plant and he desires to have the latest and the best ideas and equipment incorporated in it. His visits to meat packing plants of Chicago and investigation of convention exhibits proved highly interesting and informative, he stated.

Gordon Nussbaum, veteran Oppenheimer Casing Co. representative, made a trip to Austin, Minn. to take a short fishing vacation immediately before the AMI convention and was overcome by the heat. Because he was confined to bed under his doctor's orders he was forced to miss the 1947 meeting, which would have been his twenty-fifth consecutive AMI convention.

CONVENTION TWOSOMES CHAT

TOP: Harry Batt (left), partner, Philadelphia Boneless Beef Co., and Harry K. Lax of F. C. Rogers Co., both of the Quaker city. CENTER: Two John Morrell & Co. representatives facing the flashbulb are H. T. Quinn (left), Sioux Falls, S. D., and J. P. Foster, Topeka, Kans. LOWER: O. F. Matthews (left), beef sales manager, with C. I. Sall, superintendent, also of John Morrell & Co., Sioux Falls.

H. C. Liebmann, secretary-treasurer, Liebmann Packing Co., Green Bay, Wis. states that the firm has redesigned its private grading legend and shortly will begin to grade and brand a portion of its beef kill.

Staff members of meat plants operating in South America who were at the convention stated the monetary and food control measures adopted recently by the British government have not as yet affected their operations.

Ted Broecker, president, Klarer Provision Co., Louisville, Ky., spent much of his free time in the lobby discussing with other packing executives the new refrigeration unit he recently installed.

HOW TO ADMINISTER BETTER SUPERVISORY TRAINING PROGRAMS

HAROLD F. NORTH: I wish to compliment the program committee of this convention for setting aside time to discuss an important question of today—supervisory training. This is not new American Meat Institute policy, for 25 years ago it cooperated with the University of Chicago school of business administration in setting up a program which had for its objective education in subjects that have special expression through management of the livestock and meat industry.

H. F. NORTH

This work was extended in evening courses wherever the interest was such as to justify it and the teaching personnel was available. It arranged for the publication of important books that have become a part of the libraries of those who are interested in the livestock and meat packing industry. All of this became the basis for rather widely used correspondence study courses.

AMI Interest in Program

The primary interest of the American Meat Institute in the subject of supervisory training today is to promote supervisory training among its member companies, urging them to make full use of all existing facilities available in most sections of the country today. Industrial relations sections, known by that and various similar descriptive titles, are to be found at many of our universities; notably, Chicago, Princeton, Yale, Michigan, Illinois, Stanford and California Institute of Technology.

Programs are sponsored and literature is made available by the National Association of Manufacturers and many state associations; the American Management Association, and the Y.M.C.A. in its conferences at Silver Bay, Blue Ridge and Estes Park.

The work of Training Within Industry Foundation at Summit, N. J., was organized to carry on in peacetime operations training skills which served so well in meeting the war time demands upon industry in the United States.

The second interest of the American Meat Institute is to provide assistance in the development of programs which will make for better supervisory performance in its member companies. Upon the foreman depends the satisfaction and well being of employes and the ultimate success of any enterprise.

The foreman *is* management. To say only that he is a part of management is to disregard the real management function he performs. Levels of authority and areas of performance may vary or be limited in the organization charts of American industry, but the foreman can never be anything else but management in the place he occupies by appointment.

The primary job of the foreman is production, but he can produce only with the assistance of people. Machines are inanimate, materials are too; both perform according to and within the limits of reasonably well defined standards. Manpower is the most important factor in supervisory success or failure but unfortunately it is unpredictable and must be capably directed if it is to perform well.

Leadership Is Vital

This requires *real* leadership ability. Leadership rests on a foundation of full knowledge of the job and full knowledge of the responsibilities. These are variables because they differ rather sharply according to the supervisor's authority and jurisdiction. Real leadership ability also rests upon skill in instructing, skill in improving methods and skill in leading. These are constants for they are an essential quality found in every successful supervisor directing the work of manual labor or that of other employes.

Full knowledge of the job means a familiarity with materials, processes, tools, machines, products and technical skills required by the work. The supervisor must have the capacity for imparting these to workers. Full knowledge of responsibilities means a clear understanding of one's responsibilities as management and the "rules of the game" under which he must work. These include the union agreement, safety rules, company policy, inter-department relations and production schedules. The good supervisor not only possesses these knowledges but he abides by them.

Skill in instructing is the use of the four-step method which came to us in the job instruction training program: Prepare the worker, present the operation, try out performance and follow up. It needs a firm belief in the principle "If the worker hasn't learned, the instructor hasn't taught."

Job Methods Program

Skill in improving methods is largely a matter of encouraging suggestions to make the best use of manpower, machines and materials in order to produce more quality products, at lower cost, with greater income and satisfaction to employes. This is accomplished through use of the simple rules of the job methods training program: Record the present method; challenge each part of method; question every detail; develop the new method, and get the new method into use.

Skill in leading is perhaps the most important and must be acquired if the supervisor is to lead instead of boss. "A supervisor gets results through people." This means applying the foundations for good relations which are basic in the job relations training program: Let each worker know how he is getting along; give credit when due; tell people in advance of changes that will affect them, and make the best use of each person's ability.

Failure in any of the five basic requirements of leadership—knowledge of the job, knowledge of responsibilities, skill in instructing, skill in improving methods and skill in leading—not only diminishes the capacity of the supervisor to get high quality production at

LARD COMMITTEE SESSION WAS WELL ATTENDED

Lard has its troubles today (as ever) and here are some of the Institute lard committee members trying to solve a few at the meeting on Tuesday morning. Dr. Kraybill, head of the AMI research department, was addressing the members when this photo was taken. He may be seen standing at left. John H. Moninger of the AMI presided.

low cost but it also may lead to grievances.

Good supervisory training programs are essential if good results are to be achieved. They may vary in degrees of formality depending upon the size and kind of business. They are, however, an essential responsibility of management and should be considered important in the appointment of a supervisor in order that he may have a reasonable opportunity to make good on the job.

Too often supervisors are appointed to their positions considering only their knowledge of the materials and machines used in the department with complete disregard for training in the essentials that will help them to improve performance. Too often supervisors are appointed without proper attention being given to their leadership responsibilities and consequently they are not given the necessary training, the use of which will make it possible for them to get the best results from people under their direction.

How to Develop Program?

How can we develop a supervisory training program? We must keep in mind certain basic principles that are the same whether the program is for a large or a small company. The first step is to survey the training problem so as to determine certain information —who is to be trained; what he must know; how much he can bring to the job, and what he must be taught; when and where it should be done, vestibule training or on the job, and finally, who is best qualified to teach him.

The next step is the development of material through consultation with all interested people. This is important for two reasons. It makes certain that authoritative and necessary information will become a part of the program in a way that makes interested people familiar with it and results in endorsement of the training program by people who will be affected by it. Care must be taken to relate all training programs to the basic principles found in the job instruction, job methods and job relations training programs.

Any training program, no matter how well developed or complete its content, will be successful only to the extent that conference leaders are capable of using the material as was intended. This can be assured by holding training institutes at which those who will be appointed as conference leaders will have the opportunity to become familiar with the purpose of the program, the nature of its content, manner of presentation and, above all, have an opportunity to demonstrate a capacity for using the material in the way it was intended to be used. Finally, there must be a follow up program that will make certain that material is being properly used and keep those responsible for it alert to the need for changes.

A case study showing the development of a training program in a large, multiple unit organization will serve to illustrate how such activities tend to grow by penetration both in acceptance as well as in the development of character. We began nearly 30 years ago in Swift & Company to develop organized training class programs. It was a beginning that recognized the idea most people have that "training is a desirable thing—for the other fellow." It was not long until the material used in these young men's training classes for office boys interested their supervisors.

To meet this new demand late afternoon classes for general office people and a plant supervisors conference program were set up to use lesson material in plant operations, mathematics, foremanship and policies of packing plant operations. These and courses in economics, business law, composition of business letters and science became subject matter of the programs.

In recent years the plant supervisors conference program has taken on a much more advanced approach. Almost all plant supervisors have been given the basic training material found in the job instruction, job methods and job relations training programs. Special conferences have been developed in the field of employe relations, which have for their primary objectives the prevention and proper handling of grievances.

This program gives full recognition to the fact that *all* grievances tend to result from some one of four specific causes—imperfect job instruction, imperfect job methods, imperfect job relations or imperfect understanding of union agreement or company policy which has resulted in misapplication or misunderstanding.

Another series of conferences is based on the economics of the American free enterprise system, with Clark & Rimanoczy's book "How We Live" as text material.

The Swift & Company management conference program was designed to re-emphasize the foreman's place as management. It develops by the conference discussion method the ways in which he expresses his authority and fulfills his responsibilities.

We have just completed the development of a new program titled "Safety Through Supervision" in which supervisors will be trained in the proper ways to determine safety hazards; instruct workers how to avoid them with safety; the proper use of corrective measures to be used when violations of rule occur, and to place the responsibility for accident prevention on the same level of importance as the responsibility for quality and costs.

It is important to keep in mind as we consider this case study that to the extent possible, advanced treatment of any subject matter is always related to the basic principles established in the job instruction, job methods and job relations programs. These are to all advanced training what the primary school is to the secondary school and college or university education.

CHAIRMAN MAXWELL: Several months ago the interest of the industry was aroused by the announcement of *Meat* magazine that it would recognize accomplishments in certain fields in the meat industry through awards for successful achievements in those fields. Mr. E. B. Nattemer, publisher, will now make those awards.

They Came From Afar and They Had a Good Time

1. Left to right: Julian Weil, vice president, and Leon Weil, president, Weil Packing Co., Evansville, Ind., with C. E. Field, president, Field Packing Co., Owensboro, Ky., and J. W. Stout, manager, Buring Packing Co., Wilson, Ark.

2. Miss L. A. Wehrnheim, executive assistant, Food & Container Institute, Chicago, Ill.

3. William J. Van Valkenburgh, comptroller; S. Edgar Danahy, chairman of the board; Alfred J. Danahy, and George F. Koehler, vice presidents, all of Danahy Packing Co., Buffalo, N. Y.

4. Mrs. Marie Daugherty, director of homemakers' service; Ken Franklin, Redman B. Davis, and H. Howard Biggar, department of information, all of the National Live Stock and Meat Board, Chicago, Ill.

5. Tobin Packing Co. representatives included: F. W. Hagerman, secretary, and F. J. Clark, vice president, Fort Dodge, Ia.; F. M. Tobin, president, Rochester, N. Y., and H. K. Gillman, general mechanical supervisor and F. Crabb, Fort Dodge, Ia.

6. Merrill Maughan of the AMI, shown at his desk in the registration hall, was one of the convention's busiest persons.

7. Frank P. Able, of C. F. Vissman & Co., Louisville, Ky., at a moment of ease.

8. W. Q. Braun, chemist, B. J. Verbeck, T. H. McGuine, chemist, and F. H. Stewart, all of Wilson & Co., Chicago.

9. Among the representatives of Armour and Company, Chicago, were: C. T. Heuinkveld, J. G. Woolsey, L. H. Van Danacker, and J. J. Tierney.

10. Harold Graham of the general superintendent's office, Wilson & Co.; with Maj. Clifford Decker and R. L. Graf of the Food & Container Institute, all of Chicago.

11. E. W. Stephens, West Coast representative of the AMI, with Charles Cornelius, Bob Cornelius, and C. W. Roemhild, secretary, of the Cornelius Packing Co., Los Angeles, Cal.

12. Joseph Robinson, superintendent of David Davies, Inc., Columbus, O.

13. Among the AMI Chicago office representatives were: Kelly Owen, Wilbur H. Coultas, and Dr. B. W. Beadle, research chemist.

14. Food & Container Institute representatives included: Lt. Louis G. Boettner, Maj. Victor A. Davis, Harry L. Ferold, and Dr. Howard Lightbody.

15. A. Horberg, general manager, Superior Packing Co.; Charles Pozin, vice president, Sinai Kosher Sausage Corp., and R. I. Loewenstein, secretary, Superior Packing Co., all of Chicago.

MERIT AWARDS FOR UNUSUAL SERVICE TO INDUSTRY PRESENTED

E. B. NATTEMER: In sponsoring the Accomplishment Award, *Meat* magazine was motivated by a desire to act in the best interest of our industry. Such programs in other fields have demonstrated their effectiveness; we reasoned that the nation's first food industry might profit from similar activity.

A surprising number of meat packing executives entered the accomplishments of other organizations, particularly those of concerns serving and supplying the industry in various capacities. This attitude displayed approval of the plan to reward developments which contribute to industry progress; it also indicated that packer executives acknowledge and appreciate the contributions to their operations made by manufacturers, suppliers and associations serving the field.

To what degree this is true in other fields we cannot say, but the fine relationship between this industry and its supporting organizations, plus the very evident desire for close teamwork, is an indication of progressive thinking among the nation's packers and an eagerness for modernization and improvement in all phases of packing plant management. It augurs well for continued achievement in the industry.

To provide a wide panorama of past accomplishments early in the postwar era, and for other sound reasons which were set down in the announcement of award winners in our August issue, a ten-year period was decided upon. Thus, it must be borne in mind that awards were not confined to accomplishments of very recent date. It should also be mentioned that certain developments which pre-dated the time limit are still doing yeoman service in the field but were automatically eliminated by contest regulations.

The panel of judges was obliged to evaluate all entries meeting contest requirements on the basis of their value to the entire industry. Entries of accomplishments serving small segments of the industry well had to bow to those accomplishments having wider application. These considerations, plus the necessity for reviewing dates, details and data over a long period of time and the high quality of many entries, made judging a difficult task.

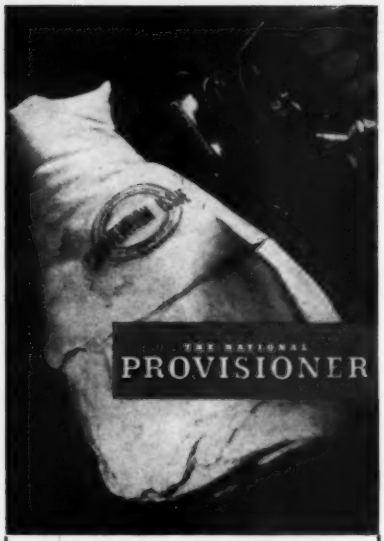
At this point I want to pay public tribute to the men who served on the panel of judges. They are packing plant executives well known to you all and we were indeed fortunate that they agreed to serve in this capacity. On behalf of *Meat* and the industry I express sincere thanks to Mr. H. C. Greer, vice president and general manager of Kingan & Co., Indianapolis, Ind.; to Mr. T. H. Hocker, vice president and director of Geo. A. Hormel & Co., Austin, Minn.; to Mr. R. W. Ransom, superintendent of technical operation and construction, John Morrell & Co., Ottumwa, Ia., and to Mr. H. M. Shulman, secretary of Hammond-Standish & Co., Detroit, Mich.

I need not stress the fact that it would not be easy to gather a group of judges having a more complete array of talent ranging from technical and operating knowledge through to general executive experience. But I do want to emphasize the point that these men, believing in the good which the award could bring to the industry, gave unselfishly and freely of their time and talents. They served without compensation. They spared no pains in exploring every angle of the entries submitted; nor did they hesitate to eliminate an entry if it failed to meet contest regulations or measure up to the very high standards they expected of award winners. Not only are they well qualified but they are men of independent minds who approached their difficult task seriously, analytically and with a basic "know how" of meat packing which was refreshing and revealing.

The judges did not fail to take into consideration related contributions made by firms and individuals and the editors of *Meat* were instructed to issue corollary awards where contest regulations permit. In accordance with contest regulations, *Meat* magazine took no part in selecting winners and the decisions of judges were full and final.

It now gives me great pleasure to present these awards. The competition was keen and the judges were critical. *Meat* magazine joins the industry in commending the winners and extending sincere congratulations.

Mr. Nattemer then presented awards to the Allbright-Nell Company, for the Anco Bacon Forming Press, under the Machinery & Equipment classification; a corollary award to Swift & Company, for the original idea which contributed to the development of the Anco Bacon Forming Press; to the Allbright-Nell Company, for the Anco-Tobin hog depilator process, under the Methods & Processes classification; a corollary award to Frederick M. Tobin, for inventing and contributing to the development of the Anco-Tobin hog depilator process; to the American Meat Institute, for the meat educational and consumer advertising program under the Advertising & Merchandising classification; to Dohm & Nelke, Inc., for the Bacon-Master bacon forming press, under the Machinery & Equipment classification; a corollary award to Louis J. Menges, for inventing and contributing to the development of the Bacon-Master bacon forming press; to Linker Machines, Inc., for the Automatic Ty sausage linker, under the Machinery & Equipment classification; to Milprint, Inc., for Mil-O-Seal casings, under the Supplies & Services classification, and to Townsend Engineering Company, for the Townsend Skinning & Fleshing machine, under the Machinery & Equipment classification.



THE COVER PICTURE

Our AMI convention issue cover picture was selected from a number of prints resulting from the combined efforts of THE NATIONAL PROVISIONER editorial, art and photographic staffs.

The editors and artists conceived the idea, planned the layout and provided the necessary props. The art department planned the artistic arrangement, and the finished parts of the picture from which the engravers made the cuts.

Photo fans in the packing industry will appreciate the difficulties of retaining gradation when combining two subjects so far apart in their light reflecting qualities as the skinned portion of a ham, and the black crackle finish of a branding iron. This was successfully accomplished, however, by judicious backlighting, cautious front lighting, normal exposure for the whites, under development of the negative to prevent blocking up of the whites, followed by printing on an extremely hard paper to show the texture of the subject. Technical data: one No. 1 flood light three feet above and slightly back of the subject; front light, shaded daylight; exposure, 1/10th second at f11; development, 7 minutes in a medium developer; printing, No. 5 glossy bromide paper.

CONVENTION PERSONALITIES

W. R. Roegelein, president, Roegelein Provision Co., San Antonio. Tex., reports the firm has completed construction of additional coolers, largely increasing capacity.

T. T. Heckworth, president of Florence Packing Co., Florence, Ala., and **Mrs. Heckworth** were two of the southern visitors who did not like the Chicago climate.

Back to the Grass Roots at Session 3

G. M. FOSTER

EGGERT SCANS THE MEAT SUPPLY; PRODUCERS TAKE LONG-TERM LOOK

THE meeting reconvened at 2:10 p.m. on September 3, 1946, with George M. Foster, member of the board of directors of the American Meat Institute, presiding as the chairman.

CHAIRMAN FOSTER: Our first speaker is well known to you through his bulletins from the Institute. He is an economist who has come to be known as a top-notcher in the work that the Institute has assigned to him. His forecasts of livestock production and prices give us some clues as to how he works them out and I know we are impressed with their soundness. I take pleasure in introducing R. J. Eggert, well known to most of you as Bob Eggert, the first speaker on our afternoon program.

R. J. EGGERT

R. J. EGGERT: The objective of this outlook statement will be: 1) to review briefly what has happened to meat supplies and prices since OPA controls were removed; 2) to develop in detail our estimates of livestock slaughter, meat production and consumption for 1948, along with some of the basic assumptions and reasonings behind these estimates, and 3) to wind up with a short discussion on factors affecting the demand for meat in the year ahead and in the foreseeable future.

My procedure will be to review with you the various tables and charts that have been distributed, trying to point out in the time available some of the highlights that they contain. It is hard to talk about the livestock and meat outlook without referring to a lot of figures, and it is hard for an audience to follow figures without being able to look at them, as well as hear them. Also, I am presenting this material in this way so that you may take these tables and charts away with you for further study. I sincerely hope that you will look at them again.

Let us turn to the table labeled "Index of Wholesale Meat Prices, Meat and Lard Production Under Federal Inspection, and Prices of Lard at Chicago." In the first column you will notice that the Index of wholesale meat prices dropped from a high point of 251, reached during the "pipeline-filling" period immediately after OPA controls were removed, to an index of 178 in the last week in January. Since that time, wholesale meat prices have advanced to an index of 237, an increase of 33 per cent from the late January low point. In the next column, on the other hand, you will notice that meat production reached a weekly peak for 1947, of 421,000,000 lbs. in mid-January, and has dropped to 269,000,000 lbs., a decrease of 36 per cent by late August. Lard production also reached a seasonal peak in mid-January, of 56,000,000 lbs., and currently has dropped seasonally to about 25,000,000 lbs. a week.

Following the principle that we don't like to be reminded of unpleasant things, the less said about lard prices the better.

Since there has been widespread concern about the high level of retail meat prices, I would like to divert, for a moment, from the supply situation and ask you to turn to the table titled "Comparison of Retail Prices of Selected Food Items, United States Average, June 1947 with 1939–41 Annual Average." It is significant to notice that while meat prices have advanced materially from prewar levels, there are numerous other food items that have also increased sharply. For example, wheat flour, corn meal and canned tomatoes have shown more of an increase than any of the beef items, and salmon, fresh apples, potatoes, prunes, navy beans and shortening have all increased as much, or more, than any of the meat items.

Now turning to the next table (See Table 1 on this page) titled "Retail Meat Prices and Calculated Pounds-of-Meat Equivalent of Manufacturing Workers' Weekly Earnings," it will be observed that the weekly earnings of the average worker in all manufacturing industries would buy nearly as many pounds of meat in June 1947 as the average weekly wage bought in 1939. In fact, a similar comparison made with meat prices and wages in 1920, the previous peak, shows that weekly earnings will buy one-fourth more meat now than a week's earnings bought in 1920.

Table 2 shows what has happened to meat prices compared with OPA

TABLE I

Retail Meat Prices and Calculated Pounds-of-Meat Equivalent of Manufacturing Workers' Weekly Earnings

Cuts	U. S. Average Price per Pound[1]		Pounds-of-Meat Equivalent of one Week's Earning[2]	
	June 1939	June 1947	June 1939	June 1947
	Cents	Cents	Pounds	Pounds
Beef				
Round Steak	36.2	78.0	66.8	62.7
Rib Roast	29.7	62.1	81.4	78.8
Chuck Roast	23.4	50.6	103.3	96.7
Lamb				
Leg of Lamb	30.0	66.3	80.6	73.8
Pork				
Pork Chops	29.6	74.2	81.7	65.9
Sliced Bacon	31.2	72.3	77.5	67.6
Sliced Ham	46.9	93.1	51.5	52.5

[1]Source: Bureau of Labor Statistics, United States Department of Labor.
[2]Calculated from average weekly earnings of workers in all manufacturing industries, published by the Bureau of Labor Statistics as follows: June, 1939, $24.17; June 1947, $48.91. (August, 1947)

TABLE II

Retail Meat Prices in the United States, By Cuts, Under Price Control and February, May and June, 1947 (Cents Per Pound)

Cuts	During Price Control[1]				After Price Cont.[2]		
	OPA Ceiling Prices (a)	Cost of Subsidy (b)	Average Over-charge (c)	Total Cost to Consumers	Feb.	May 1947	June
Beef							
Round Steak	41.8	11.3	12.7	65.8	65.8	69.3	78.0
Rib Roast	36.6	8.8	9.9	55.3	55.4	56.8	62.1
Chuck Roast	29.4	7.9	9.1	46.4	45.1	45.9	50.6
Hamburger	29.4	8.0	6.6	44.0	40.2	40.4	43.9
Veal							
Cutlets	45.2	5.1	13.2	63.5	75.2	78.5	84.2
Lamb							
Leg of Lamb	42.3	9.5	2.9	54.7	60.8	61.2	66.3
Pork							
Chops	37.5	5.6	4.1	47.2	63.2	70.6	74.2
Sliced Bacon	40.8	6.1	3.9	50.8	68.9	69.0	72.3
Sliced Ham	51.1	7.7	14.6	73.4	83.6	89.6	93.1

[1]Calculated by the American Meat Institute, using (a) OPA ceiling prices for cuts comparable with those for which the Bureau of Labor Statistics collects retail prices, (b) additions for subsidies prorated by retail cuts paid to offset rollback in retail meat prices and to encourage production, and (c) average overcharge for cuts of meat as shown by survey of meat prices in eleven cities made by independent market research agencies during February and March, 1946.
[2]United States average prices for meat collected by Bureau of Labor Statistics in large cities.

ceilings. While meat prices, like most other commodities, have advanced since OPA controls were lifted, the increase in real cost of meat to consumers has not been as great as a comparison of current prices with fictitious OPA ceilings would indicate. In fact, when allowance is made for the subsidies that consumers paid indirectly in their tax bills, and the black market overcharges, some meat cuts actually are selling at very near, and for some items even below, the actual cost of meat to consumers under OPA. For example, the OPA ceiling for hamburger was about 29c a pound. The cost of the subsidy, appropriately pro-rated for hamburger, was about 8c a pound, and the average overcharge was 7c a pound, making the total cost to consumers, 44c a pound. It will be noted that recent retail prices for hamburger have been below 44c.

Now let us turn to Table 3 titled "Per Capita Civilian Consumption — By Types of Meat, 1948 Compared with 1947 and 1939-41 Average." This table contains our estimates of per capita meat consumption for 1948, compared with the estimated consumption in 1947 and with the prewar average of 1939-41. You will notice that we expect per capita beef consumption next year to be 69 lbs., slightly less than our consumption this year, but up 23 per cent over the prewar average. Veal consumption is expected to be about 9.3 lbs., off 7 per cent from this year, but up nearly one-fourth over the prewar average. Lamb and mutton consumption is expected to drop sharply to less than 5 lbs. per capita, a decrease of one-fifth from this year, and nearly one-third lower than the prewar average. We are expecting pork consumption next year to be about 65 lbs. per capita, off 10 per cent from this year, and 4 per cent below the prewar average.

Per capita consumption of all meats in 1948 is expected to total about 148 lbs., a decrease of 10 lbs. from our extremely righ rate of consumption this year, but still about 10 lbs. larger than our per capita consumption in 1939-41. Lard consumption, at 12.7 lbs. per capita, is expected to be down about 6 per cent from 1947, and 8 per cent less than the prewar average.

Table 4 shows how this 148 lbs. per capita is expected to be distributed throughout the year. The estimates shown in this table are significant since it appears that we again will have an abnormal seasonal distribution of our meat supply throughout 1948. Notice that on an annual rate basis, the per capita consumption of 157 lbs. for the January-March quarter is relatively large for that time of year. In the second quarter of the year, per capita rate is expected to drop to 145 lbs., and may reach a low of 135 lbs. annual rate in the third quarter of the year, 5 per cent below this year and equalling our low rate of consumption during that quarter for the prewar period. This represents an extremely sharp seasonal drop in consumption from the first quarter of the year. Seasonal improvement in livestock marketings in the last quarter of 1948 is expected to raise per capita consumption on an annual rate, to 155 lbs. These estimates strongly suggest that next summer's meat supplies may be far short of balancing demand at prices which the general public will consider reasonable prices to pay.

A somewhat more optimistic observation is that in spite of the 10-lb. decrease in per capita meat consumption in 1948 compared with 1947, there will be only one quarter of the year (the third quarter of 1948) when meat supplies are expected to be less than those available at the present time. Current per capita consumption of 142 lbs. (annual rate basis) is expected to be exceeded by 17 per cent in the last quarter of 1947, 11 per cent in the first quarter of next year, 2 per cent in the second quarter and 9 per cent in the fourth quarter of 1948. However, per capita

TABLE III

Per Capita Civilian Consumption—By Types of Meat
1948 Compared With 1947 and 1939–41 Average

Item	1948[1] Annual Rate (Pounds)	1948[1] Percent Change From 1947	1948[1] Percent Change From Average	1947[1] Annual Rate (Pounds)	1939–41[2] Annual Rate (Pounds)
Beef	69.3	− 1%	+23%	70.0	56.5
Veal	9.3	− 7	+24	10.0	7.5
Lamb and Mutton	4.7	−19	−30	5.8	6.7
Pork (Excl. Lard)	64.7	−10	− 4	71.7	67.7
Total Meat	148.0	− 6	+ 7	157.5	138.4
Lard	12.7	− 6	− 8	13.5	13.8

[1]Estimates by the American Meat Institute have been developed chiefly from number on farms, pig crops, storage stocks, government allocations, and other data published by the United States Department of Agriculture and other government agencies.
[2]Bureau of Agricultural Economics, United States Department of Agriculture.

TABLE IV

Per Capita Civilian Consumption—Annual Rate by Quarters
1948 Compared With 1947 and 1939–41 Average[1]

Item	1948 Annual Rate (Pounds)	1948 Percent Change From 1947	1948 Percent Change From Average	1947 Annual Rate (Pounds)	1949–41 Annual Rate (Pounds)
January-March	157	− 7%	+15%	168	137
April-June	145	− 6	+ 8	154	134
July-September	135	− 5	Same	142	135
October-December	155	− 7	+ 4	166	149
Year	148	− 6	+ 7	158	138

TABLE V

Federally Inspected Average Weekly Meat Production
1948 Estimates Compared With 1947 and 1939–41 Average

Highly Preliminary

Item	1948* Million Pounds	1948* Percent Change From 1947	1948* Percent Change From Average	1947 Million Pounds	1938–41 Average Million Pounds
Beef					
January–March	145.0	− 1%	+61%	145.8	90.3
April–June	131.0	− 8	+36	143.0	96.1
July–September	136.5	− 7	+31	147.5*	104.1
October–December	152.0	− 3	+42	156.0*	107.3
Total Jan.–Dec.	141.0	− 5	+42	148.0*	99.4
Veal					
January–March	13.0	− 4	+34	13.5	9.7
April–June	15.5	+ 3	+41	15.1	11.0
July–September	16.5	−11	+43	18.5*	11.5
October–December	17.0	− 6	+40	18.0*	12.1
Total Jan.–Dec.	15.5	− 5	+40	16.3*	11.1
Lamb and Mutton					
January–March	11.5	−18	−19	14.1	14.2
April–June	9.5	−30	−27	13.5	13.0
July–September	11.0	−21	−19	14.0*	13.6
October–December	11.0	−24	−23	14.5*	14.3
Total Jan.–Dec.	11.0	−21	−20	14.0*	13.8
Pork					
January–March	140.0	− 3	+15	143.6	121.7
April–June	114.5	− 9	+ 4	126.1	110.5
July–September	99.0	−11	+ 3	111.0*	96.0
October–December	130.5	−16	−11	156.0*	146.5
Total Jan.–Dec.	121.0	−10	+ 2	134.0*	118.7
Total Meat					
January–March	309.5	− 2	+31	317.0	235.9
April–June	270.5	− 9	+17	297.7	230.6
July–September	263.0	−10	+17	291.0*	225.2
October–December	310.5	−10	+11	344.5*	280.2
Total Jan.–Dec.	288.5	− 8	+19	312.5*	243.0
Lard					
January–March	31.0	−16	+ 6	37.1	*29.3
April–June	26.0	−20	− 2	32.3	26.5
July–September	22.5	−20	+ 4	28.0*	21.7
October–December	30.0	−10	−10	33.5*	33.4
Total Jan.–Dec.	27.5	−16	− 1	32.7*	27.7

Source: "Livestock, Meats, and Wool Market Statistics and Related Data, 1945", and "Livestock, Meats, and Wool Market Reviews and Statistics, 1946 and 1947 Weekly Reports", United States Department of Agriculture. *Estimates by the American Meat Institute were developed chiefly from data published by the United States Department of Agriculture and and other Government agencies.

consumption in the third quarter of next year is expected to be 5 per cent less than the relative low rate of consumption at the present time.

As many of you know, weekly figures on the slaughter and production of meat under Federal inspection were developed by the War Meat Board. The livestock branch of the Department of Agriculture has continued to collect and release these figures each week. You may recall receiving weekly Institute bulletins which summarize these figures and compare them with the previous week and the comparable week a year ago. We believe that this information on weekly meat production should be extremely useful to members of the industry since it gives "up to the minute" factual data on supplies.

If you will examine Table 5 entitled "Federally Inspected Average Weekly Meat Production," you will notice there preliminary estimates for 1948, of the average weekly meat production for each of the species, and for lard by quarters. I won't take the time to go through each of these quarterly estimates with you, except to point out that we are expecting substantial changes in the seasonal pattern of production next year. This is one of the tables that I hope you will want to give careful study and consideration at your leisure.

Estimates on Slaughter

Now I know that some of you have become rather impatient to see our estimates on the number of head slaughtered, since many of you are more familiar with the figures on number of animals than on the production or consumption of meat. You will find our estimates in Table 6, labeled "Livestock Slaughter." From this table you will see that we are estimating slaughter under federal inspection as follows: Cattle, 15,000,000 head; calves, 7,300,000 head; sheep and lambs, 13,500,000 head; hogs, 46,500,000 head. These figures are for the calendar year, so for hogs you may want to refer to the bottom part of the table, which shows our estimate of federally inspected hog slaughter on a hog marketing year basis. You will notice that we are expecting 14,500,000 head of hogs during the October-December period, 16,600,000 during the four months January-April, and 16,900,000 head during the five months May-September period. This gives us a total of 48,000,000 head for the 1947-48 hog marketing year, compared with 47,200,000 during the current year, and about 45,000,000 for the 1939-41 average.

Total meat production, including farm slaughter, in 1948 is estimated at 21,800,000 lbs., a 7 per cent decrease from 1947 but 16 per cent above the 1939-41 average.

One of the major considerations in evaluating the livestock supply outlook in 1948, of course, is the production of feed during 1947. The high degree of uncertainty regarding this year's corn crop makes most difficult the job of developing reliable estimates at the present time. Frankly, we have assumed in the estimates that you have just seen that our final corn production will be somewhere between 2,300,000,000 and 2,400,000,000 bu., and that about one-fifth to one-third of the crop stands a good chance of turning out to be soft, high-moisture corn. The latest government estimate of the corn crop for 1947 is 2,437,000,000 bu., a 26 per cent decrease from last year, but off only 5 per cent from the prewar average. Our total feed grain supply, as indicated by this table, will be about 120,000,000 tons, a decrease of 16 per cent from 1946, and also about 5 per cent less than the prewar average. The number of grain consuming animal units, on the other hand, has dropped slightly from the prewar period (due principally to the sharp decrease in horse numbers), making our feed supply per animal unit about 15 per cent less than a year ago, and only 4 per cent below the 1939-41 average.

The amount of soft corn has an important bearing on the outlook, since it will greatly affect the number of cattle going back to feed lots, as well as the length of the feeding period. Our first quarter, 1948, expectation of cattle slaughter is relatively large, since we expect a considerable number of short-fed cattle will be fed in order to utilize the soft corn. This, however, suggests

TABLE VI
Livestock Slaughter

Item	1948 Forecast[1]			1947[1]	1939–41 Average[2]
	1,000 Head	Percent Change From 1947	Percent Change From Average	1,000 Head	1,000 Head
Cattle					
Federally Inspected	15,000	− 6%	+49%	16,000	10,040
Other Wholesale and Retail	5,800	+ 2	+23	5,700	4,721
Farm	700	−12	+23	800	571
Total	21,500	− 4	+40	22,500	15,332
Calves					
Federally Inspected	7,300	− 5	+36	7,700	5,361
Other Wholesale and Retail	4,100	− 5	+33	4,300	3,094
Farm	600	−14	−17	700	722
Total	12,000	− 6	+31	12,700	9,177
Sheep and Lambs					
Federally Inspected	13,500	−21	−23	17,000	17,571
Other Wholesale and Retail	2,400	Same	−35	2,400	3,677
Farm	600	Same	+ 3	600	583
Total	16,500	−18	−24	20,000	21,831
Hogs					
Federally Inspected	46,500	− 3	+ 1	48,000	46,095
Other Wholesale and Retail	12,000	− 4	− 1	12,500	12,119
Farm	12,500	− 4	− 8	13,000	13,641
Total	71,000	− 3	− 1	73,500	71,855
Hogs—Federally Inspected Marketing Year by Periods					
October-December	14,500	+ 6	+ 7	13,681	13,584
January-April	16,600	− 1	+ 8	16,763	15,424
May-September	16,900	+ 1	+ 5	16,756	16,115
Total	48,000	+ 2	+ 6	47,200	45,123

[1]American Meat Institute.
[2]United States Department of Agriculture.

TABLE VII
Total Meat and Lard Production[1]

Item	1948 Forecast[2]			1947[2]	1939–41 Avg.[3]
	Million Pounds	Percent Change From 1947	Percent Change From Average	Million Pounds	Million Pounds
Beef					
Federally Inspected	7,330	− 5%	+42%	7,700	5,171
Other Wholesale and Retail	2,590	+ 2	+28	2,535	2,029
Farm	260	−13	+15	300	227
Total	10,180	− 3	+37	10,535	7,427
Veal					
Federally Inspected	805	− 5	+40	845	575
Other Wholesale and Retail	490	− 8	+43	530	342
Farm	85	−15	− 1	100	86
Total	1,380	− 6	+38	1,475	1,003
Lamb and Mutton					
Federally Inspected	565	−22	−21	725	715
Other Wholesale and Retail	100	Same	−34	100	151
Farm	25	Same	+ 4	25	24
Total	690	−19	−22	850	890
Pork					
Federally Inspected	6,300	−10	+ 2	6,980	6,171
Other Wholesale and Retail	1,620	− 7	+ 6	1,775	1,530
Farm	1,630	− 9	− 5	1,750	1,710
Total	9,550	− 9	+ 1	10,505	9,411
Total Meat					
Federally Inspected	15,000	− 8	+19	16,250	12,632
Other Wholesale and Retail	4,800	− 3	+18	4,940	4,052
Farm	2,000	− 8	− 2	2,175	2,047
Total	21,800	− 7	+16	23,365	18,731
Lard and Rendered Pork Fat					
Federally Inspected	1,425	−16	− 1	1,700	1,442
Other Wholesale and Retail	325	+ 5	− 2	310	333
Farm	350	Same	−14	350	409
Total	2,100	−11	− 4	2,360	2,184

[1]Dressed weight of Cattle, Calves, Sheep and Lambs and Pork Meat Production.
[2]American Meat Institute.
[3]United States Department of Agriculture.

a shortage of fed cattle starting in the second quarter and becoming more pronounced in the third quarter of 1948.

Our estimate of federally inspected cattle slaughter for the fourth quarter of 1948 is fairly large and is based upon our expectation of a continued downward swing of the cattle cycle.

In estimating calf slaughter we considered the fact that there is a downward trend in dairy cows, which should result in fewer calves marketed. We also felt that the quarterly distribution next year will be more like a normal seasonal pattern.

1947 Lamb Crop Low

Sheep and lamb slaughter estimates for next year were influenced by the fact that the 1947 lamb crop was the lowest since 1925, and by our expectation of a slowing up in the liquidation of stock sheep, resulting in fewer old sheep being marketed for slaughter next year. We are expecting reduced lamb feeding during the winter period, because of: 1) the smaller lamp crop; 2) the good range conditions this year which are expected to bring a greater percentage of lambs to market in slaughter finish this fall, and 3) the smaller corn crop, which should have some influence on both the number fed and the length of feeding.

In the case of hogs, a mixture of factors will affect time of marketing. Development of the corn crop is reported to be very spotty, and farmers who are actually short of corn may sell their hogs comparatively early at relatively light weights. The high price of corn and the low hog-corn price ratio will discourage purchasing additional feed. On the other hand, in areas where the crop is larger, but soft, the feeding programs will be geared to take best advantage of the soft corn and other feeds including protein supplements and still make them go as far as possible. This will result in somewhat delayed marketings.

The net result, we think, will be to throw somewhat more hogs than would be expected into the first quarter of 1948 than in the last quarter of 1947. In any event, average live weights will be considerably lighter than they have been the past few years. The distribution of marketings in the second and third quarters of 1948 will be dependent upon the size of the fall pig crop. There is strong evidence that farmers' intentions to raise 9 per cent more of fall pigs, as reported by the United States Department of Agriculture in June, will not materialize. Our estimate of slaughter has been based on a 4 per cent increase in the fall pig crop, and this was predicated upon the fact that we had an extremely favorable hog-corn ratio last winter and spring, as well as upon the possibility of a fairly large late fall farrowings if there should be a sizable amount of soft corn. However, we think this small increase in fall pigs will be offset by the smaller number of packing sows that will be available next summer, because of an estimated 15 per cent decrease in the spring pig crop of 1948, compared with the spring pig crop of this year. For the year as a whole, we are expecting pork yields to be about 135 lbs. per hog, which will be about 10 lbs. less than in 1947.

The lard situation deserves special attention. You will recall that we are expecting about a 16 per cent decrease in lard production under federal inspection next year compared with this year. This is accounted for in part by a small decrease in the number of hogs slaughtered under federal inspection during this calendar year, but mainly by the sharp decrease in the anticipated average weights and yields.

Our per capita lard consumption estimate of 12.7 lbs.—a 6 per cent decrease from 1947—was influenced by expectations of somewhat smaller lard exports in 1948 than in 1947. In evaluating the outlook for lard, however, it should be kept in mind that indications point to a substantial increase in soybean and cottonseed oil production next year, and continued large importations of coco-

What Are You Doing About Your Lard?

1. W. C. Coffin, general superintendent, Rath Packing Co., Waterloo, Ia.

2. Dr. Henry R. Kraybill, AMI research director, Chicago.

3. C. H. Strobusch, (left) purchasing agent, and R. G. Reynoldson, plant engineer, Oscar Mayer & Co., Madison, Wis.

4. T. A. D. Jones, chief engineer, Kingan & Co., Indianapolis, Ind.

5. W. J. Shannon, assistant director of research, Oscar Mayer & Co., Madison, Wis.

6. George Peary, superintendent and J. C. Donaldson, president, Brandon Packers, Ltd., Brandon, Manitoba, Canada.

7. James McMann, superintendent, and Thomas Enright, sales manager, of William E. Davies, Co., Inc., Chicago, Ill.

8. H. W. Barley, sales, E. M. Todd Co., Richmond, Va.

9. R. W. Strohmenger and Don Everhard, supervisor, Aster Meats, Inc., Akron, O.

10. C. A. Nockleby, vice president, Geo. A. Hormel & Co., Austin, Minn.

11. Tom Wallace, AMI field representative for Ohio, with R. W. Sander, sales department, E. Kahn's Sons Co., Cincinnati, O.

12. R. R. Klauke, sales manager, Krey Packing Co., St. Louis, Mo., and S. H. Keil, meat buyer, Atlas Meat Co., Chicago, Ill.

13. C. G. Dyson, president, Dyson Packing Co., Houston, Tex., relaxes between sessions with latest issue of *The National Provisioner.*

14. Bert Freeman, general superintendent, Burns & Co., Ltd., Calgary, Alta., Canada, chats with Henry D. Tefft, director of packinghouse practice, for the AMI.

15. W. R. Roegelein, president, Roegelein Provision Co., San Antonio, Tex.

16. N. S. Cone of the canned meats department, Rath Packing Co., Waterloo, Ia., and L. A. Daver, vice president, Tom Boy Stores, Inc., St. Louis, Mo.

17. B. Paul Thompson, vice president, Banfield Bros. Packing Co., Tulsa, Okla.

18. Ralph D. McManus, public relations department, Armour and Company, Chicago.

19. F. Perkins, sales manager, Tobin Packing Co., Fort Dodge, Ia.

20. Vern Schwaegerle (left), AMI advertising director, with Jean E. Clohesey, associate editor, *The National Provisioner.*

21. S. A. Lang, Columbia Packing Co., Boston, Mass.

22. E. L. Heckler of the merchandising department, Armour and Company, Chicago.

TABLE VIII

Seasonal Indexes of Meat and Lard Production and Cold Storage Stocks, 1921–1940

Month	Federally Inspected Meat and Lard Production[1]						Cold Storage Holdings 1st of Month[1]					
	Beef[2]	Veal[2]	Lamb and Mutton[2]	Pork[3] Ex. Lard	Total Meat[4]	Lard & R.P.F.[5]	Beef[6]	Pork[7]	Lamb and Mutton[8]	Miscel. Meats[9]	Total Meats[10]	Lard & R.P.F.[11]
January	102.0	94.1	106.2	133.0	116.2	116.8	119.2	88.8	129.6	111.4	97 2	82.0
February	85.6	81.2	95.2	99.9	93.4	102.6	116.6	109.5	118.0	121.9	111.7	93.4
March	94.6	96.4	100.5	96.2	96.4	101.0	113.0	121.8	115.2	113.8	121.2	101.1
April	94.6	96.5	98.0	92.4	93.3	98.5	108.5	121.4	105.5	107.1	119.1	105.8
May	99.2	103.0	96.3	96.1	98.8	101.5	99.6	120.0	89.1	98.8	115.6	109.8
June	100.8	101.6	94.3	98.1	98.5	101.6	92.1	115.6	83.9	96.4	110.8	113.2
July	97.8	101.0	93.0	89.4	94.2	95.6	88.3	114.2	84.4	99.3	109.4	119.6
August	103.1	106.2	101.8	80.7	92.8	89.3	84.2	106.8	75.6	98.7	103.1	121.3
September	106.4	107.1	108.3	77.0	92.4	85.3	83.6	92.5	78.2	96.4	91.1	111.4
October	114.0	117.0	111.6	93.9	104.5	92.0	86.2	76.9	91.3	85.9	77.0	94.8
November	103.2	102.8	96.5	112.5	106.2	101.7	97.2	64.3	108.2	82.4	68.1	74.2
December	98.7	93.1	98.3	130.8	113.3	114.1	111.5	68.2	121.0	87.9	75.7	73.4
Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Calculated from data published by the United States Department of Agriculture by graphic method of seasonal analysis. Calendar months without allowance for variation in number of working days per month, based on period 1921–1940. [2]Dressed weight. [3]Pork meat only. [4]Dressed weight of cattle, calves, sheep and lambs plus pork meat only. [5]Lard and pork fat rendered weight. [6]Frozen, cured and in process of cure. [7]Frozen, dry salt, and pickled—cured and in process of cure. [8]Frozen, 1922–41. [9]All edible offal and trimmings frozen, cured, or otherwise prepared for food (1931–40). [10]Total beef, pork, lamb and mutton and miscellaneous meats. [11]Prime steam, kettle-rendered, neutral, other pure lard and rendered pork fat.

nut oil and copra from the Philippines. Furthermore, studies show that while meat consumption increases as real incomes go up, just the reverse is true of lard consumption. This leads to the conclusion that the demand for lard has not been aided by the increase in consumer incomes, and may even have suffered some setback.

Meat exports in 1948 were roughly estimated at about 200,000,000 lbs. compared with about 300,000,000 for 1947—the final figures resting largely upon political and diplomatic developments. We are expecting the armed forces' requirements to be about 525,000,000 lbs. next year, a moderate decrease from 1947. This will represent exports of about 1 per cent of our production, and military requirements of about 2½ per cent of our production next year.

Exports of grain during the past government's fiscal year probably will affect meat supplies substantially more than the direct exportations of meat. In fact, exports of feed grains (excluding rice and wheat) will have the effect of reducing meat supplies by at least 5 per cent compared with what they would have been had this amount of feed been available for meat animals.

Consumer Demand and Prices

Consumer demand has an extremely important bearing on the price of livestock and meat. In fact, changes in the desire and ability to pay, on the part of the consumer, over a period of years, has had considerably more influence on the total value of meat than have changes in the supply of livestock The following outlines briefly some of the main factors affecting the current strong demand for meat. In addition, an effort will be made to evaluate both pro and con, the major influences that may determine the direction of consumer demand in 1948.

A. Why Is Demand Strong Now?

1. Civilian employment advanced to a new all-time high in July, of 60,100,000 jobs, according to the Census Bureau. This compares with 46,100,000 jobs in 1939, or an increase of 14,000,000 people working—mostly in urban areas. When nearly one-fourth more people have jobs, they want and are able to pay for more meat.

2. Industrial production in July stood at an index of 180, off 5 per cent from March 1947 peacetime peak of 190, but still two-thirds over the 1939 level, according to the Federal Reserve Board. This index of physical industrial production indicates a high level of business activity, as well as a tremendous outflow of physical goods.

3. Weekly earnings of workers have more than doubled since prewar, and are also at record levels. Earnings of production workers in June 1947 averaged $48.91 a week, compared with an average of $23.86 in 1939, according to the Bureau of Labor Statistics. Further gains in weekly earnings will be reported when the July data become available, resulting from the effect of higher wages in the coal, metal working, machinery and telephone industries.

4. "Personal incomes," a summary measure of the entire demand, largely reflecting the greater number of jobs, higher industrial pay and increased farm income, also reached an all-time peak in June 1947, jumping to an annual rate of $193,000,000 or an increase of 166 per cent, according to the Department of Commerce.

5. Real incomes per capita, calculated by adjusting actual dollar incomes for taxes and increased cost of living, were up one-third in the first half of 1947, compared with 1940, according to the mid-year Economic Report of the President. In other words, although average per capita incomes in terms of dollars have increased more than 1½ times, the average individual can buy only about 33 per cent more goods now than in 1939. As someone recently put it, the reason a dollar won't do as much for you as it used to is because no one wants to do as much for a dollar as they used to. Furthermore, our population has increased by over 11,000,000 people since 1940.

B. What Are The Factors That Will Maintain or Strengthen the Demand for Meat in 1948?

1. A large, backlogged, domestic demand for many goods, including houses, automobiles, new equipment, etc., still exists. This demand is important since it is based on the public's lack of goods which they are accustomed to have, know how to produce, are sure they want and to which they believe they are entitled. Furthermore, they have the money—witness the large accumulation of liquid savings. Bank deposits plus currency outside of banks currently amount to about $165,000,000,000, compared with about $60,000,000,000 in 1939, and in addition, there are over 30,000,000,000 worth of Series E United States Savings Bonds outstanding. In fact, average liquid assets of the approximately 46,000,000 family units in the United States in early 1947 were slightly over $2,800, compared with average liquid assets of $2,650 in the spring of 1946, according to a study made by the Federal Reserve Bank. These savings will be supplemented by veterans' bonus payments and the cashing of terminal leave bonds this fall.

2. Inventories in the hands of manufacturers, wholesalers and retailers, while larger dollarwise than prewar, are still low in relationship to dollar sales and in terms of physical volume.

3. A further expansion in consumer credit seems highly probable when controls are relaxed in November 1947. Latest data on consumer credit outstanding indicates a total of $10,900,000,000 (June 1947). While this looks large compared to the total of 5,300,000,000 in 1943, it still is only moderately above the 9,900,000,000 in 1941. Consumer credit currently amounts to 6 per cent of current personal income, while in 1941 it was over 10 per cent of personal income.

4. Construction expenditures advanced substantially in June and July, indicating that this major industry may finally be getting under way after a very slow start in early 1947. Private expenditures for new construction and repair work reached an all-time high in July of a little over $1,000,000,000, surpassing by 6 per cent the previous peak established in August 1946.

5. The widespread expectation, on the part of business leaders and the general public, of a downward movement of prices by the end of 1947, is in itself a strengthening factor relative to the future price outlook. The recent For-

AMI CONVENTION EARLY BIRDS GET CAUGHT

This group of conventioneers was snapped by the N.P. photographer early on the first day. Left to right: J. DeVries, superintendent, Grand Rapids Packing Co., Grand Rapids, Mich.; Oscar Emge, president, W. R. Emge, C. L. Elpers and U. P. Reising, all of Emge Packing Co., Inc., Fort Branch, Ind., and R. G. Denton, Morris Laboratories Co., Inc., New York City.

tune Poll, which reported opinions of over 28,000 business executives, indicated that over *two-thirds* of them expected moderately or sharply lower cost of living by the end of 1947 (only 7 per cent expected an increase). This strongly suggests that there are large numbers of persons who were postponing expenditures (since they thought prices were going down) whose demands have not been reflected in the current level of prices. The question then becomes one of how long many of these people can or will postpone their expenditures, especially considering a possible change in their future price expectations resulting from the sharply advancing commodity price level in recent months.

C. *What Are The Factors That Will Modify or Decrease the Demand for Meat in 1948?*

1. Foreign demand for industrial goods and foods, stimulated by large loans, has been an important factor in supporting employment and consumer income. Congress has made available funds for foreign relief during the 1947–48 fiscal year of about $1,900,000,000, and some additional money is available through the International Bank and the International Monetary Fund, which has already loaned $250,000,000 to France and $195,000,000 to the Netherlands. However, the available dollar funds to the British will be largely exhausted by the latter part of 1947. While foreign demand is expected to continue at a high level throughout the remainder of 1947, it is difficult to see how exports in 1948 can continue at current levels because of the serious shortage of foreign exchange. Aid under the Marshall Plan probably will develop in early 1948, but is expected to be modest compared with previous loans.

2. Increased competition for the food dollar from other forms of expenditure is expected to absorb a larger part of consumer buying power in 1948, leaving less for meat and related items. Under the pressure of larger installment payments, increased rents, greater availability of durable goods, including appliances and automobiles, *even though employment and earnings stay at high levels, the average family probably will not have as much money left to spend for meat as they have had in recent months.*

3. Record peacetime physical output of goods will tend to lower prices of many items in 1948. The Federal Reserve Board index of industrial production indicates that we are producing goods (in physical terms) at a rate nearly two-thirds greater than prewar, while real consumer incomes are up only about one-third over prewar. The adjustment of these two factors will eventually result in somewhat lower prices and may cause some increase in unemployment.

Conclusions about the demand situation should be watched carefully and reviewed from time to time. I personally expect employment and consumer income, as well as physical industrial production, to continue at high levels for the remainder of 1947, extending into early next year, with some moderate decline in several price levels by the end of 1948. However, even though employment and earnings stay at high levels, the average family will not have as much money left to spend for meat as they have had in recent months.

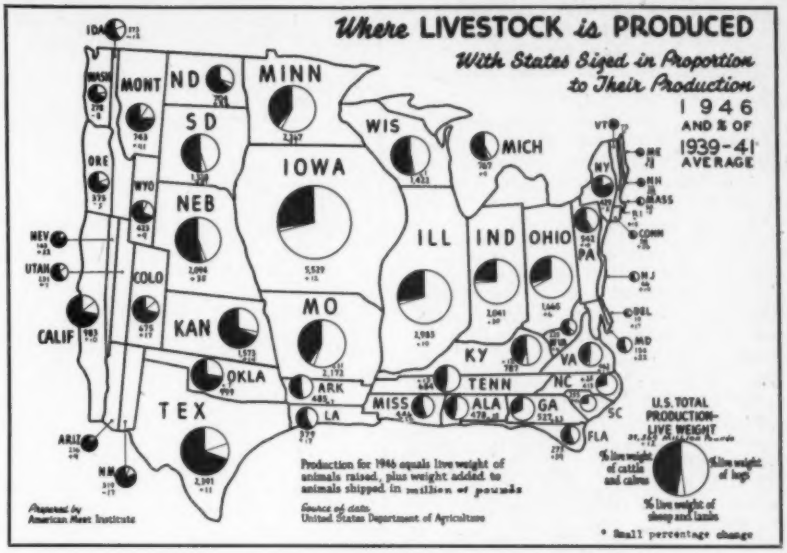


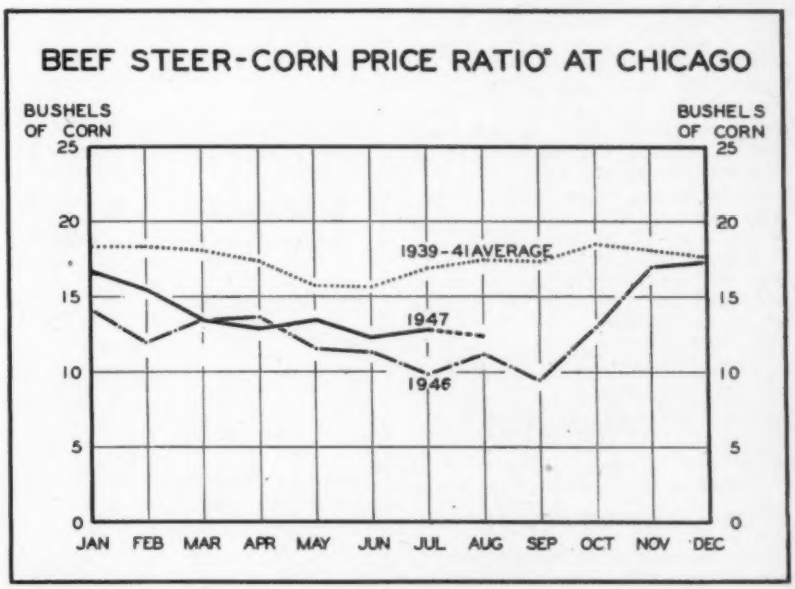
CHART 1: WHERE LIVESTOCK ARE PRODUCED

Time does not permit my going over each of the remaining charts in detail with you this afternoon. However, for the most part they are charts and tables that are self-explanatory, and contain information that supplements or supports our supply estimates. But, in addition, there are several new tables and maps that contain state and regional information that I think will be of considerable interest to members of the livestock and meat industry.

Briefly, each table or chart shows the following:

Chart 1—Where Livestock Is Produced. A re-drawing of the map of the United States allowing an equal area for each pound of livestock produced greatly enlarges the corn belt states and greatly shrinks many of the states outside the Corn Belt. Total United States production of livestock in 1946 was estimated at approximately 39,500,000,000 lbs. (live weight) which was 12 per cent greater than the 1939–41 average. Individual states differ considerably from the average.

Chart 2—Beef Steer-Corn Price Ratio at Chicago. Although corn prices have



*BUSHELS OF CORN EQUAL IN VALUE TO 100 POUNDS OF LIVE BEEF STEER

CHART 2: BEEF STEER-CORN PRICE RATIO

been high relatively to fat cattle prices, returns from fed cattle marketed during the first half of 1947 have been quite favorable. Demand for feeder cattle this fall will be influenced by the extent of soft corn in this year's crop.

Chart 3—Hog-Corn Price Ratio at Chicago. The hog-corn price ratio has declined steadily since February and now is relatively unfavorable. The unfavorable ratio combined with the re-

CHART 3: TREND OF RATIO →

duced corn crop is expected to result in lighter weights of hogs in the 1947–48 marketing year, and a probable reduction in the 1948 spring pig crop.

Chart 4—This map of the United States is drawn so as to allow the pigs saved in each state approximately 11 acres of farm land per hog. Although about one-third smaller than the record crop of 1943, the number of pigs raised in the 1947 spring season is 5 per cent larger than the 1939–41 average.

Chart 5.—Stock Sheep. This map of the United States is drawn so as to allow the stock sheep in each state approximately 30 acres per head. Sheep numbers have decreased considerably during the past few years.

To wind up my remarks I now would like to call your attention to Chart 7, labeled "Meat Prices Compared to All Commodity Prices." This chart clearly demonstrates that in each of our major wars in the past we have had a sharp upward movement in the price levels of both all commodities (the black line) and meat prices (the dotted line). How-

CHART 4: WHERE PIGS ARE →

ever, each of these sharp advances has been followed by relatively sharp price declines. The chart also clearly shows that in peacetime, meat prices fluctuate up and down more than do all commodity prices. I have had the personal conviction for some time that the major part of our price declines after World War II will be delayed until sometime in the early 1950's. Nevertheless, in view of the drastic declines that have occurred after each of the major wars, and their serious effect on the meat packing industry, the "yellow light" of caution seems appropriate.

Chart 6—Beef Cows—Where They Are. This map of the United States is drawn so as to give each beef cow in each state about 57½ acres of farm land. The number of beef cows on farms and ranches is now about 50 per cent larger than prewar.

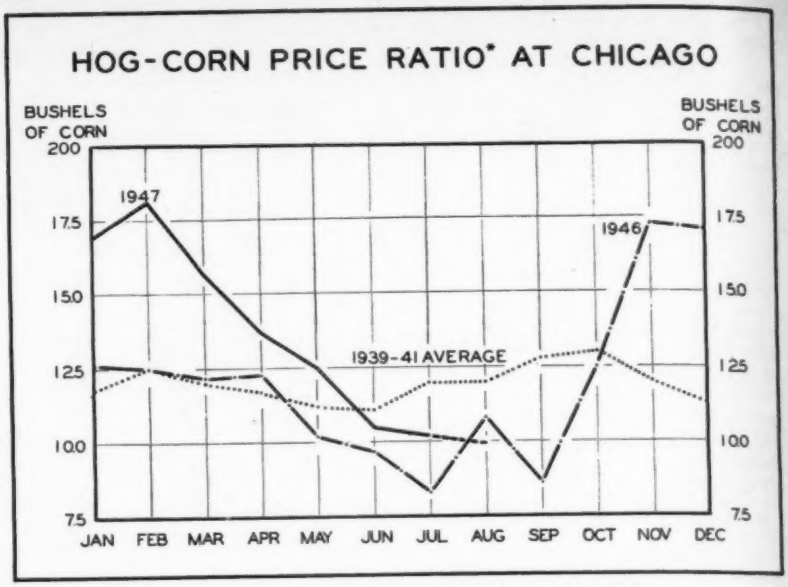
Our conclusions from these data are as follows:

1. Meat consumption next year is estimated at 148 lbs. per capita—10 lbs. less than in 1947, bpt 10 lbs. more than the prewar average.

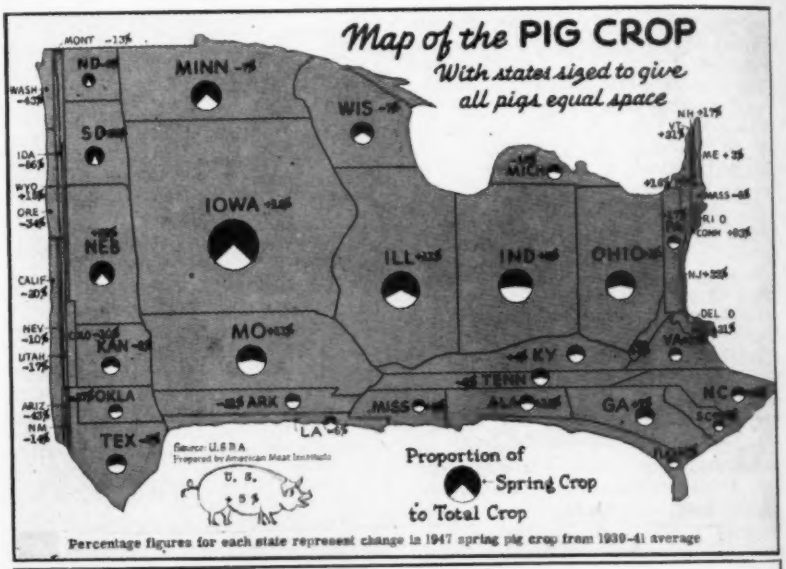
2. Current per capita meat consump-

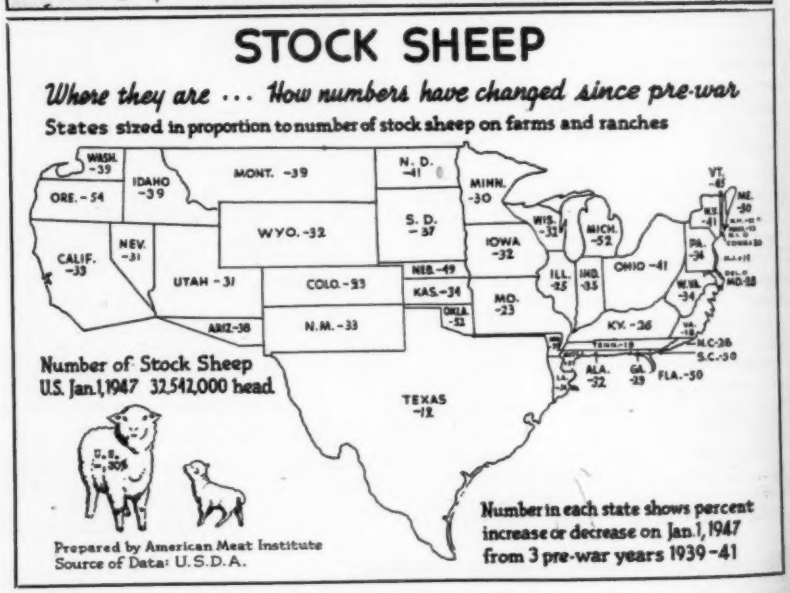
CHART 5: SHEEP LOCATION →

tion is expected to be exceeded by 17 per cent in the last quarter of 1947, 11 per cent in the first quarter of next year, 2 per cent in the second quarter and 9 per cent in the fourth quarter



*BUSHELS OF CORN EQUAL IN VALUE TO 100 POUNDS OF LIVE HOG





of 1948. However, per capita consumption in the third quarter of next year is expected to be even 5 per cent less than the present low rate.

3. Employment and consumer incomes are expected to remain at relatively high levels throughout the remainder of 1947, extending into early 1948, but some moderate weakness is expected to develop in the demand for meat by the end of next year.

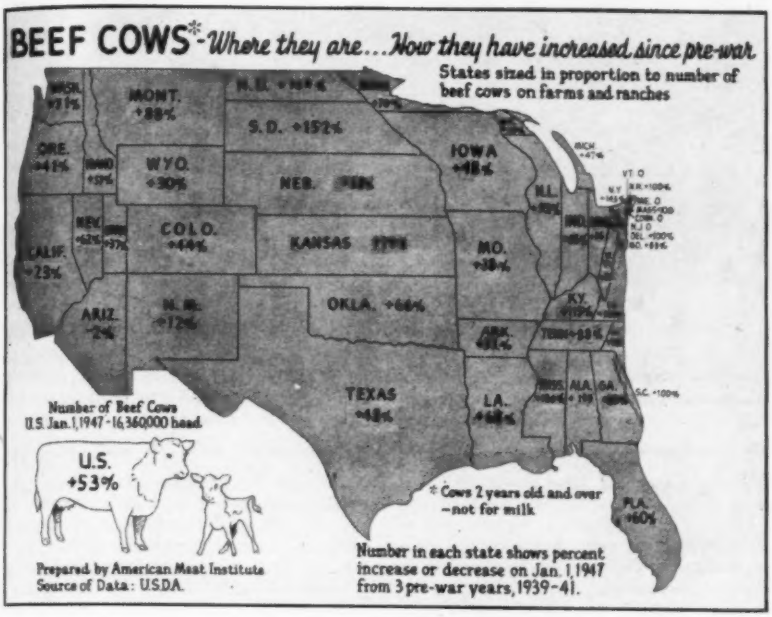


CHART 6: DISTRIBUTION OF BEEF COWS

CHAIRMAN FOSTER: With a great deal of pleasure I introduce our next speaker, a fellow Hawkeye, from the state where the tall corn grows (provided we don't have too much rain—or not enough rain) and I refer to Dr. W. A. Craft, director of the Regional Swine Breeding Laboratory, USDA, Ames, Ia., and a member of the faculty at the graduate school.

Dr. Craft presents an illustrated discussion of research work to improve market types of swine being carried on by the Regional Swine Breeding Laboratory, United States Department of Agriculture, and cooperating state agricultural colleges.

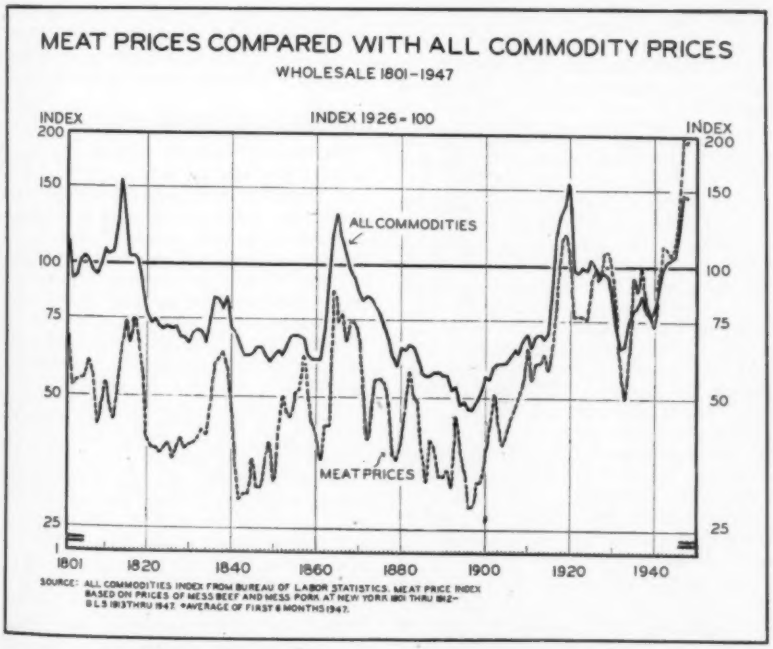


CHART 7: MEAT PRICES AND OTHER COMMODITIES

USDA RESEARCH WORK TO IMPROVE MARKET TYPES OF LIVESTOCK

W. A. CRAFT: Improvement of hogs through breeding has been achieved largely through the development and maintenance of many herds of purebred hogs. These have provided a source of purebred boars for use by farmers in producing market hogs. The improvements have been made mainly by selecting and breeding for type. Type has served as an overall measure of desirability in hogs. It has been defined only in the abstract or general sense. Market grades serve also in classifying hogs at market weights. These likewise are defined only in the abstract or general sense.

DR. CRAFT

The hog producer needs well defined standards for type and market grades of hogs of various weight classes. A high degree of stability in the use of these standards would aid the producer in maintaining progress because much time is required between the time improvement is first accomplished in breeding stock, and the time that large numbers of animals appear on the markets bearing the improvement—about seven to ten years in hogs.

In the early days attention was focused principally on two types commonly called "lard type" and "bacon type." "Lard type" was applied to hogs which had won favor with the farmers in the country. These hogs were thick, relatively short, good feeders and produced cuts which were fat. The breeding was largely of stocks or breeds developed in this country. "Bacon type" was applied to hogs which were relatively long in body and lacked width, as compared with hogs of "lard type." Hogs of "bacon type" were largely of stock or breeds developed in England for the production of Wiltshire sides. They produced leaner cuts than "lard type" hogs.

Long-Time Controversy

Throughout the greater part of the nineteenth century markets for hogs in the United States favored heavy, fat hogs. There was a relatively steady demand for lard and heavy fat cuts did not suffer discrimination. With the advent of vegetable oils and their competition with lard and changes in eating and other habits of the people, pressure has increased on both heavy-fat cuts and lard.

The type problem has been a continuous controversy since about 1880. Professor Shaw of the Minnesota station in 1898 stated: "No question pertaining to the growing of livestock is attracting so much attention today in the United State as that of the bacon pig. Nor is

there any question in livestock circles that is provoking so much controversy." He urged that hogs grown in the United States must be modified to resemble the bacon pig in form and characteristics to meet changes in consumer preferences in our own domestic markets.

The main function performed by the hog in the United States has been to convert an abundance of corn to pork and lard. The "lard type" was proved suitable for that. But developments in feeding have demonstrated that corn, properly supplemented, can be used to produce high quality pork and bacon.

Experimental studies relating to type in hogs in the United States began about 1895. Beginning with the work of Professor Shaw of Minnesota, Dean Curtiss and Professor Craig of the Iowa station, performance of hogs of different types and the carcasses produced have been studied, varying in detail, by most of the experiment stations in the country.

Research on Type in Hogs

In general these trials have shown that differences in performance and in composition of carcasses are considerable for extremes in type such as large and small type, even within a breed. When "bacon type" has been compared with hogs of intermediate "lard type," the differences in performance and composition have not been large but in general favor the "lard type" for rate and economy of gain and the "bacon type" for leanness and desirability of cuts.

Within a breed, type varies from a small, early maturing, excessively fat type to a large, heavy-boned, late maturing and rangy type that must be fed to weights of 250 lbs. or more to carry enough finish to produce carcasses with desirable quality. Claims and counter claims as to the merits of these types led to experimental studies notably at the Idaho, Illinois and Iowa stations, also the federal station at Beltsville.

Reports of these investigations agree in general that hogs of intermediate type are more suitable to the requirements of both producers and consumers than those of the extremes. But the controversy goes on. The matter of type is still receiving much attention. Since 1939 some of the swine record associations sponsor "type conferences" for the purpose of focusing attention of breeders, judges, field representatives, market hog buyers and others on the type of hog seemingly most suitable to the markets.

What We Have Learned

Producers desire large litters, good pig raising proclivities of sows, rapid growth rate of pigs, economical gains and hogs that are suitable for the market when they desire to sell. Results from research indicate that some degree of compromise is necessary with respect to these traits.

In general sows that are the best pig raisers tend to be a little large in type, or toward bacon type. But type alone is no assurance of good productivity of sows. Pigs producing the fastest and most economical gains in general are of an intermediate type and become fatter than necessary when self-fed to weights above approximately 220 to 230 lbs.

Understanding among hog producers as to an intermediate, "middle of the road," or "meat type," varies greatly. In general each breeder of the pure breeds believes the type he has is "it."

Breeders know, however, that type is a continuously variable character, especially in herds of intermediate or of large type. Type results from the expression of many hereditary factors or genes and the interactions among them. Grades vary largely with degree of finish when hogs are marketed, and degree of finish fluctuates because of numerous factors affecting the feeding of hogs.

In our markets the practice of buying hogs on the basis of live weight has been developed and followed. In this system dressing percentage has proved to be a major consideration. Although all parts of the carcass are processed and merchandised, the major portion of the value of a hog carcass is realized from five principal cuts—ham, loin, belly, picnic and butt. These cuts constitute on the average somewhat less than half of the weight of the live hog. The packer desires a high yield of these cuts. He desires well shaped, firm and otherwise high quality cuts. Short shanks contribute to shapely hams and shoulders. An optimal degree of fatness is essential for quality. Side cuts with uniform thickness and prominent streaks of lean are desired by the packer and the consumer.

During the last 25 years a great deal of research has been conducted with hog carcasses by experiment stations and packers. Time will permit reference to only a few of these reports.

INSTITUTE DIRECTORS DISCUSS BUSINESS MATTERS AT LUNCHEON

General view of members of the board of directors of the American Meat Institute at their luncheon meeting on Thursday. The leaders of the Institute met at noon on both Wednesday and Thursday in the third floor dining room to dispose of business for the past year and formulate policies for the year ahead.

In 1925 Wentworth and Ellinger reported results of a detailed study of the cut-out value of two groups of hogs; each group averaged slightly over 200 lbs. These were selected for type on a basis of length of body, and designated as long-bodied and short-bodied hogs. Dressing percentage was 1.6 per cent in favor of the long-bodied group. Final analysis revealed that the long-bodied hogs were worth 46c per hundred weight more than the short-bodied hogs. The major advantage as to yields of cuts in favor of the long-bodied group was in ham, loin, picnic and shoulder butt. These four cuts plus the bellies made up 47.9 per cent of the live weight of the long-bodied group, but only 45.5 per cent in the short-bodied group. The short-bodied group excelled in yield of fat back, bellies and lard.

Larger Hogs Grow Faster

Studies of growth, fattening and yields of carcasses at the Purdue station, reported by Scott, showed that the larger the type of hog the more rapid was the daily gain from farrowing to market weight. The lean cuts decreased and the fat cuts increased in percentage of the total carcass as depth of fat increased. Neither length nor weight of carcass alone provided enough information to permit appraisal of yields of cuts.

Crampton reported in 1938 results from a study of five traits affecting or related to size of loin-eye muscle in carcasses of pigs produced in Canadian testing stations. One of the traits was rate of gain in live pigs, the others were size of ham, depth of shoulder fat, evenness of back fat and size of shoulder. Together these five traits accounted for slightly less than 20 per cent of the differences found in eye of lean. Size of ham was much more closely related to eye of lean than the other factors. It

accounted for nearly half of the total difference. Size of ham and eye of lean increased together, but as the other items increased eye of lean decreased.

Hankins and Ellis have studied the composition of hams with respect to type of hogs. In their report of 1935 they point out that with feed-lot weights of about 225 lbs., hams decreased approximately 2 lbs. as type of hog decreased from large to small. Weight of separable fat increased 1 lb. Chemical analysis brought out also that the hams increased in fat in proportion to the lean as type changed from large to small.

McMeekan and Hammond in experiments conducted at Cambridge, England observed that fat increased from about 5 per cent at birth to 43 per cent in the 220-lb. pig. Muscle made up 39 per cent at birth, 46 per cent at 16 weeks and again 39 per cent at 220 lbs. live weight.

Hankins and Ellis reported in 1945 a detailed study of composition and nutritive value of pork as related to weights of animals and cuts from hogs of intermediate type. For hogs weighing 175 lbs. lean content of the loin and ham were the same, 59 per cent. With increasing weight of hog percentage of lean in loin increased slightly, to 60 per cent, but dropped in the ham to 54 per cent. A 17.3-lb. ham from a 225-lb. hog contained 55.8 per cent lean, a 13.9-pound ham from a 175-lb. hog contained 59.3 per cent lean. The difference in edible meat content of the two hams, however, was less than 1 per cent. The shoulder maintained its lean content slightly better than the ham. Percentage of lean in bacon decreased more than for the other cuts. Total percentage of lean in the carcass decreased from about 41 per cent in the 175-lb. hog to 37 per cent in the 250-lb. hog. Closely similar results have been reported by Loeffel and co-workers of the Nebraska station from studies of carcasses from hogs of different weights.

Edible Meat Content

These studies revealed that total edible meat per unit of weight increased with increasing weight of the hogs. If cuts were equally acceptable, 250-lb. hogs would be worth about 5 per cent more per unit of live weight than 175-lb. hogs. But the differences were due to an increased amount of fat in the cuts. Does the consumer want this extra fat? It cooks out of the cuts. Both packer and retailer must trim fat from large fat cuts to bring them within the limits of consumer tolerance. Consumer tolerance, of course, varies with supply and price of meats, but the fact remains that consumers buy meat for the lean, not for the fat.

As to the differences between light and heavy hogs in the trade, one example should suffice. Arthur of the Iowa station in 1940 reported that in light hogs (180-220 lbs.) in January 1928, 71 per cent of their value was in the lean cuts and 21 per cent in the fat cuts and lard. In 1940, 78 per cent of the value was in the lean cuts and 16 per cent in the fat cuts and lard. In the case of heavy hogs (270-300 lbs.) for corresponding periods 53 per cent of the value was in lean cuts and 40 per cent in the fat cuts and lard, and in 1940, 65 per cent of the value was in the lean cuts and 28 per cent in fat cuts and lard. In 1928, hams accounted for 24 per cent of the value of hogs; in 1940, 31 per cent.

PACKERS' WIVES BOARD BUS FOR TOUR OF NORTH SHORE

This group of ladies was photographed just before entering the bus which was to take them on a tour of Chicago's north shore. Also on the schedule was a stop at the famous Hearthstone House in Wilmette for luncheon. Several busses were required to transport the group.

In studies on the cooking of pork, summarized by the National Live Stock and Meat Board and conducted at various stations, the results revealed that bacon loses from approximately 54 to 79 per cent of its weight in cooking, the loss depending on method of cooking and degree of fatness. As to losses due to degree of fatness, lean bacon (containing 60 per cent lean and 40 per cent fat) lost 65 per cent in frying, fat bacon (containing 40 per cent lean and 60 per cent fat) lost 79 per cent of its weight in frying.

Feeding Costs

Mr. Culbertson of the Iowa station has supplied me with figures estimating total costs involved in producing and feeding hogs to 225 and 250 lbs. weight, using July 1947 figures. The cost for a 225-lb. hog is approximately $42.50 and for a 250-lb. hog approximately $48. Accordingly, 100 extra lbs. of hogs cost the farmer $22. If hogs weighing 225 to 275 lbs. sell at about the same price per hundred it is usually to the farmer's advantage to feed them to the heavier weights. This fact must be recognized and adjustments made which appeal to the producer if medium weight hogs and less fat are desired.

In a detailed study by Hankins and Ellis of a sample of hogs, selected for intermediate type, as to composition and nutritive value of pork from 225-lb. hogs, the carcasses averaged 30.9 in. long (aitch bone to first rib), the hind leg 22.8 in. (aitch bone to toe) and the back fat 1.6 in. These hogs were closely similar in type to those regarded as intermediate, "middle of the road" or "meat type" in the Corn Belt.

Hogs fed out in record of performance trials in the hog breeding project of the laboratory at the Iowa station have been slaughtered in the meats laboratory. The carcasses have been graded, scored, measured and cut. On a basis of these and other data it was suggested in a report of the Swine Breeding Laboratory in 1943 that carcasses from 225-lb. hogs should be 30-31 in. long from the aitch bone to the first rib, also that 1.2 to 1.5 in. of back fat on the seventh rib seemed to be enough to insure a reasonable degree of firmness for such carcasses.

Records obtained on hogs slaughtered in the Iowa project in three recent seasons bear on the point in question. These include 187 carcasses from hogs of different weights; 30 were from 231-240 lb. hogs, 101 from 216-230 lb. hogs and 56 from 200-215 lb. hogs. Dressing per cent was approximately 80 for each group. All carcasses except three graded choice, these three graded good. Carcasses of the 216-230 lb. group averaged 30 in. long. Back fat at the seventh rib averaged 1.36 in. in thickness. The flank-end of the bellies averaged .9 in. Length of hind leg, aitch bone to toe, averaged 23.3 in. These carcasses yielded 49 per cent of the live weight in the five principal cuts. Dimensions of the carcasses of the other two groups

differed onlv a little from those given for this group. These 216-230 lb. live hogs averaged 42 in. along the side from base of tail to a point between the ears, 10.6 in. wide back of the shoulders and 14.4 in. deep back of the shoulders. The foreleg averaged 12.1 in. long from the elbow to toe. These hogs, I believe, represent the upper limit of intermediate type.

Rating of Carcasses

Professor McClurg placed the carcasses of each weight class into three groups on a basis of the scores. Differences in measurements, however, do not reflect clearly the basic differences that determined the rating of the carcasses into three separate groups. Professor McClurg and Professor Kercherberger stated that they would have preferred a little more back fat and shorter legs for these carcasses. They mention further that these changes would result in a plumper and more attractive ham and a little more firmness. Scott pointed out that hogs which are thick in lean meat in proportion to length, harden at a lesser depth of back fat than carcasses having a lower ratio of lean to length. Width at the pelvic region and plumpness of ham were the only items measured externally on hogs in the Iowa project that have indicated thickness of muscle.

Hankins has proposed a standard for an "ideal hog" of about 210 lbs. slaughter weight. His proposal calls for a yield of not less than 50 per cent of the live weight in combination of the five principal cuts with an average thickness of back fat of not less than 1.5 nor more than 1.75 in.

Yields of the five principal cuts for 225-lb. hogs slaughtered recently in the Minnesota project were 48 to 52 per cent of the live weight and 68.5 to 71 per cent of the cold carcass weight. These carcasses averaged 30-31 in. in length and the back fat averaged approximately 1.5 in. Comments of carcass graders indicate that cuts of the Minnesota project hogs ranked high in quality.

Obviously yields and dimensions alone do not reflect quality of cuts. But dimensions certainly play an important part in respect to desirability of the cuts. Considerable effort has been made to find practical and reliable means of measuring quality of cuts but the problem needs further investigation.

Experimental studies bring out clearly, however, that insofar as quality and desirability of pork are concerned, fat in excess of the amount needed for a reasonable degree of firmness is undesirable, and in the end is wasteful to the consumer. When lard sells for less per pound than wholesale cuts, who gains by having more fat than is required for quality? If it sells for less per pound than live hogs the producer is taking a rap. When excessive trimming of cuts is necessary to comply with consumer tolerance for size or excessive fatness, the ratio of lean cuts and lard yields changes unfavorably to both packer and hog producer. Accordingly, producers and packers should strive together to improve practices in producing, marketing, processing and merchandising pork and pork products insofar as possible with respect to consumer preference.

Producers are trying, insofar as they are encouraged by price differentials, to supply the type and quality of hogs desired. Improvements in classifying market hogs as to type and grade, with proper price differences for each type and grade, would be a constructive step. These should be based in part on quantitative standards for the various weight classes and grades of hogs. Such standards would aid in stabilizing type and improving grading. The producer is dependent on the packer and the marketing agencies to make these improvements.

CHAIRMAN FOSTER: Our public relations committee recently made a survey of how the public regard the meat packer. Among other things which were somewhat surprising to us, we found that a great many people doubt if the meat packer is really needed in our economic scheme. I don't know just what they have in mind. Maybe they think that they can go to the butcher and buy some steaks and the butcher has the steer out in the back lot and he can slaughter the steer and deliver the steaks the next day. One of the things we are going to try and do in our advertising program is to convince the public that the packer really has a place.

Our next speaker is Mr. W. D. Farr, the man from Greeley, Col., who comes over a thousand miles to present his message. He represents the livestock producers of the western ranges and western farms. His family goes back three generations into livestock in Colorado and I know that his message will be of very great interest to you.

(FARR ON PAGE 160.)

Photographed Here and There About the Convention

1. Happy about something are these genial conventioneers (left to right): John A. Julian, plant engineer, Oscar Mayer & Co., Chicago; G. Frank Morris, purchasing agent, Kohrs Packing Co., Davenport, Iowa; R. H. Skadow, purchasing agent, Oscar Mayer & Co., Madison, and R. E. Bonini, Marathon Corp., Menasha, Wis.

2. Proud of his new small plant is Hans Daube, owner, Daube Packing Co., Corfu, New York.

3. Left to right: C. I. Elliott, development engineer, Carrier Corp., Chicago; with W. Santen, superintendent and Edward W. Olszewski, vice president, American Packing Co., St. Louis.

4. S. D. Braun, sales manager, Allied Manufacturing Co., Des Moines, Iowa.

5. Queen City packers chat with Art Pearson (left), director of the AMI department of purchasing. The others are H. A. Morgenstern, sales manager; Starr Parker, purchasing agent, and George Schlereth, vice president, all of The H. H. Meyer Packing Co., Cincinnati.

6. T. R. Selgy, Wilson & Co., Chicago.

7. Photographed at the registration desk were (left to right) Louis Kast, secretary-treasurer, Henry Kast, Inc., New York, with Mrs. Kast and Joe Messing, Newman-Messing, Inc., Brooklyn, N. Y.

8. An interested listener was Mrs. William Young (center) as conversation flowed between R. G. Denton, Morris Laboratories, New York (left), and her husband William Young, president, Decatur Packing & Provision Co., Decatur, Ill.

9. A Texas packer greets two stockmen friends (left to right): N. S. Bangs, Bangs & Terry, order buyers, South St. Paul; Dick J. Holman, president, Ft. Worth Dressed Beef Co., Ft. Worth, Texas, and J. M. O'Conner, order buyer, Fayette County Stock Yards, Washington Court House, O.

10. Left to right are M. C. Drysdale, assistant purchasing agent, Canada Packers, Ltd., Toronto, Ont., Canada, and Mrs. Drysdale and E. T. Webster, Transparent Package Co., Chicago.

11. Good friends are James M. Waldron, superintendent and R. O. Walters, purchasing agent, both men of Roberts & Oake, Inc., Chicago, and Karl Axelson, sales, Barliant & Co., Chicago.

12. Prospects for lard exports formed the topic of conversation between (left to right) C. E. Dorman, broker, C. E. Dorman Co., Boston; R. S. Fawcett, F. B. Cooper Co., Inc., New York; F. W. Gage, provision manager, St. Louis Independent Packing Co., St. Louis, and J. B. McCrea, jr., general manager, The Ohio Provision Co., Cleveland.

13. Left to right: W. F. Dietz of Libby, McNeill & Libby, Chicago, and Mrs. S. L. Komarik and Stephan L. Komarik, Griffith Laboratories, Inc., Chicago.

14. Texans stick together. Left to right are Rube Rosenthal and Sam Rosenthal, president, Samuels & Co., Dallas; Louis L. Lampo, president, Louis J. Lampo Co., Houston, and C. R. Drumright, Dallas broker.

15. Feeling chipper after a recent operation was C. R. Vann, president, Ohio Natural Casing Co., Newark, O.

16. A. H. Goodwin, Goodwin Casings Co., New York, and D. J. Harrison, president, C. A. Durr Packing Co., Inc., Utica.

17. A member of the Texas delegation was Hans Pauly, president, Pauly Packing Co., Houston.

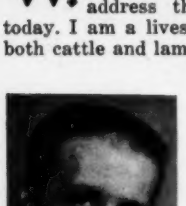
18. The latest in packaging was discussed by A. S. Hartanov, manager meat products division, Reynolds Metals Co., Richmond, Va.; J. J. Prohaska, and A. R. Redrow both of Swift & Company, Chicago.

19. G. F. Thomas, vice president and general manager, Prater Pulverizer Co., Chicago.

20. Left to right are L. C. Stix, jr., Premier Casing Co., Chicago, with Sam Grow and Bob Burnell, both of the sausage casing department, Rath Packing Co., Waterloo, Iowa.

SIGNIFICANT TRENDS IN CATTLE AND LAMB FEEDING OPERATIONS

W. D. FARR: It is a distinct honor and pleasure to be invited to address this convention here today. I am a livestock feeder, feeding both cattle and lambs in northern Colorado. I am also interested in ranch operations where we run cattle and sheep on the range. The remarks that I will make today are based on experience in these operations and I believe are a fair picture of livestock feeding in the West, particularly from the feeder's viewpoint.



W. D. FARR

Lamb feeding has changed tremendously in the last ten years. It is now beginning to stabilize on the new basis. For many, many years, Colorado and Nebraska have been the most important lamb-feeding areas in the nation, feeding approximately one-third of all the lambs fed. They are still the most important area for actual grain feeding. However, in the past ten years the feeding of lambs on Kansas wheat pastures has come to the front very rapidly, and today Kansas lamb-feeding on wheat pasture is the dominating factor in the lamb-feeding business. This is true from my standpoint because of competition in buying feeder lambs, and from a production standpoint for you gentlemen.

Wheat Field Lamb Feeding

First, of course, the wheat areas must have moisture in order to have the wheat. Then if wheat is available, there is no question but what they can feed lambs on so much cheaper a basis that no feed-lot can compare with them. Occasionally, when they have a dry year and no wheat is available, lamb-feeding will have to double up all over the country in order to take care of the feeder-lamb crop. The modernized truck which can haul water for long distances—the mobile camp-wagon or trailer-house in which the herders live, which can be moved from place to place in a few moments behind a passenger car—plus other modern equipment have had a great deal to do with the development of this type of lamb-feeding. Of course, large livestock trucks which can haul lambs from the railroad back into the wheat areas for 20 or 30 miles, and, when the lambs are fat, from the wheat pasture back to the railroad, or even to the markets, have also played an important part in developing this lamb-feeding in Kansas.

Of course, when I speak of Kansas, I have reference to all of the winter-wheat areas. Lots of these lambs are fed in eastern Colorado on wheat pasture, Texas and Oklahoma. These areas together can handle from a million to a million and a half lambs with a good crop of wheat, and that is more than any single feeding area handles; therefore it is the dominating influence in the feeder-lamb market. If the wheat lambs do well so that they can give good account of themselves to the packers, then it makes for a very good season for everyone. If the season is poor in Kansas where the lambs dress poorly, grade poorly and do not gain as well, then this whole type of operation has a tendency to tear down the market and make it unsatisfactory to the feed-lot operator also because the average quality is so poor.

However, in my opinion, from now on Kansas will be the dominating influence in the winter lamb market. We have operated in Kansas ourselves for many years and have had various experiences and have the figures to compare with our feed-lot figures, so we are sure that the future of wheat field lamb feeding is important, and it is the one area which you gentlemen should watch because when you see how many lambs go into this area, you can better judge your operations.

As far as lamb feeding in our Colorado-Nebraska area is concerned, I think it will remain at a fairly stable level from now on. Cattle feeding has made some inroads on it because we have had some dry years and have been short of hay and alfalfa, and we have not made the improvement in feeding lambs that we have made in feeding cattle. Lamb feeding is seasonal, where cattle feeding in our country, particularly with the better feeders, is coming to be more of a year-round business, and this attracts some of the better feeders to cattle and away from lambs.

There are two or three new things in our lamb feeding operations in which I think you might be interested. One is the work of the Colorado A and M college in developing the use of feeding sulphur to lambs in order to control death loss. They have worked with this for three years now and have proved without a doubt that by adding a small amount of sulphur to the ration, it is possible to reduce materially the death loss, which has always been one of our headaches. They have publicized this information, and more and more feeders are making use of it each year. This is one of the most important things which has happened to lamb feeding for many years.

There is a new chemical product called "Chlordane" which we are using this year as a grasshopper insecticide. Incidentally, it is such a good grasshopper insecticide that it is phenomenal for this purpose. It is also a wonderful insecticide for sheep ticks. The sheep can either be dipped in it or sprayed with it. By ridding our feed-lot lambs of ticks, there is not much question but what they will gain more.

I believe the future of the sheep industry of the United States depends somewhat on wool legislation in the next few years, but putting this aside and taking for granted that it will not be too harmful, I believe the sheep population will not continue to decline to any appreciable extent after this fall. Neither do I look for it to increase beyond present numbers to any great extent in the western states. I do believe that eventually, when crop prices

A GROUP WITH AN INTERNATIONAL FLAVOR

Left to right (front row): H. M. Murray, Canada Packers, Ltd., Toronto, Ont., Canada; M. J. Brennan, Columbia Warehouse Co., Chicago, and S. Lych, Pork Processing Co., Chicago. Rear, left to right: A. T. Spence, vice president, William Davies Co., Inc., Chicago; Murray Gurrentz, Local & Western Shippers, Dallas, Tex., and William Dinnon and T. J. Enright, both of Wm. Davies Co.

get lower, you will see a large sheep population go back into what are termed the "native states." There are several situations in the West that are not conducive for our western operators to go back into the range sheep business to produce feeder lambs. They cut down their herds because of labor shortages and lack of experienced help primarily during the war years.

Good Herder Important

Most anyone can look after cattle without too much trouble, but it takes a good herder to bring in a top band of lambs. Good herders are fast becoming extinct.

Sheep herding is not an occupation that young people like—even the Basquez of Idaho are not following in the profession they have followed for generations, and this is also true of the Mexicans. When you stop to think that a band of ewes and lambs at present prices is worth forty or fifty thousand dollars and the man who owns them turns them over to a herder to take into the hills where no one will see him for possibly a week or two at a time, you can see where this owner cannot rest very easy with an investment like that in the hands of an irresponsible man who could do a lot of things with the sheep.

The same thing is true when it comes to the lambing operations. The difference between a good lamb crop and a mediocre lamb crop is almost 100 per cent with the help that you have at the time of lambing. Shearing is another operation that requires some knowledge, and because of the way in which sheep are handled and worked, a green man is certainly out of place. These labor problems, plus reductions in forest grazing permits, uncertainty of the future of wool and the attractiveness of running cattle, have all entered into the decline in western sheep numbers and, as I have stated, I personally believe that these declines will be more or less permanent. I do not look for any large increase in the future.

Modern Practices in Feeding

Cattle feeding in the West has changed rapidly, as has lamb feeding in the past ten years. There are a great many more cattle being fed in the West each year, and I believe there will continue to be a larger number of cattle fed in the western states each year as we have many natural advantages. The weather, of course, is our main asset in that we have a much drier climate and very little mud with which to contend. Of course we are closer to the source of supply, which saves some freight when the animals move into the feed lots, and with the trend of the population moving West and a large demand for beef on the West Coast, as well as in the Rocky Mountain area, it has all encouraged cattle feeding to increase.

I believe that we are also more modern in our cattle feeding than almost any other area in the United States. We have many, many cattle feeders who feed cattle constantly the year round, producing uniform beef of a certain standard, week after week. They do this by having uniform rations and trying to do a good job in the manufacture of beef.

We do not feed many cattle for a long period so that they are extremely high priced specialty cattle because our dry-lot feeding does not lend itself to feeding cattle for nine months to a year's time. However, we do feed cattle consistently to a good to choice grade with more uniformity than the majority of eastern corn belt feeders do. The eastern corn belt feeder, to quite a large extent, still feeds whole corn, with hogs following, and does about the same thing he did 25 years ago. Twenty-five years ago Colorado cattle were known as pulp cattle and were discounted several dollars per cwt. Today they will go to most any market and sell up close to the top and you packers are anxious to buy them.

We feed these cattle largely by the calendar, rather than by their appearance. We know that we cannot produce good beef that will rib down, grade well and dress well without a minimum of about so many days on feed. Oftentimes it is a temptation to ship cattle at an earlier date, but invariably if we do they are disappointing to you. If we feed cattle the way we know we should, we have established a standard brand of merchandise that you can depend upon, and consistently they will sell as standard merchandise.

I think one of the most important things that we are doing in northern Colorado in cattle feeding is the new use of dehydrated alfalfa hay. As you know, this is a very high carrier of Vitamin A, as well as a good source of protein. There are many feeders using various amounts of dehydrated alfalfa hay, and we are getting marvelous results from it.

By feeding this dehydrated hay, we have cut our various sickness problems to a minimum. Our veterinary bills are approximately half or less what they were. Diseases such as shipping-fever, paratyphoid, pink-eye and many others have lessened materially since we have used this hay. Contrary to all ideas that cattle are ruminants and require a certain amount of roughage, several of us are feeding cattle a straight grain ration on the finish end of the feeding period, nothing but grain, protein supplement and dehydrated alfalfa hay. In other words, there is no bulk—no roughage whatsoever in this ration—absolutely no chopped hay or whole hay of any kind. The only fiber that the animal gets is what is contained in the rolled barley and the corn chop.

Bigger Gains Shown

This seems contrary to what is ordinarily thought of as good feeding practice, but the results show bigger gains, as well as some of the other advantages I have mentioned. We are not sure that this is quite the right thing to do; some of us are adding a small amount of prairie hay to this type of ration, just to get a little roughage into the ration, or perhaps we use 2 lbs. of chopped alfalfa per head per day for a 1000-lb. steer, which seems like almost nothing because a lamb will eat 2 lbs. of chopped alfalfa hay per day.

We are starting some tests on concentrated Vitamin B rations in our own feed-lots this winter. There have been some outstanding results along this line in poultry feeding and there should be some possibilities in cattle feeding also. However, this is brand new and we know very little about it.

I do not believe that other feeding

HIGH QUALITY DOG FOOD IS THEIR OBJECTIVE

Pictured here are members of the American Meat Institute committee on dog food who met Tuesday morning to discuss current problems and dispatch business matters. Clarence Olson, Wilson & Co., Inc., Chicago, is chairman of the committee which includes experts from various firms.

areas have done as much experimenting along these lines as we have done in northern Colorado. Certainly we have only scratched the surface because the ideas have had to be tried out in a practical way in our feed-lots as there were no data available from the various agricultural colleges to go on. Surely there is a great field along these lines for other states and areas to develop, and also for the agricultural colleges to do some real technical experimenting.

Sheep Population Stable

I made a prediction that sheep numbers in the West would stay relatively stable, or show a small increase. As far as cattle numbers in the West are concerned, I do not believe they can be much more than maintained. Of course with the stopping of the importation of Mexican cattle, there are some areas that are short of replacement cattle. However, we have had pretty good conditions and most ranches are well stocked. Ranchers have had income tax problems where it was necessary for them to carry an inventory over from year to year; and they have had good grass and good feed. Because of high-priced feed, the heavier the animal the more money he has been worth, so the natural inclination has been to carry them along. There has, in fact, been a little liquidation of older cows, but the average age of the cows has increased because the young cattle have been high enough that the tendency of the small rancher particularly has been to think that he could hardly afford to keep the heifer calf because she would bring as much as he used to think a cow was worth.

The rancher's idea was to wait a year and keep heifer calves next year. However, they were higher next year, and he put it off again. He has done this year after year until now he finds himself with more age on his cows than he realizes, and he is going to have to replace his cow herd more rapidly. This factor will also help in not increasing the cattle population in the western states. I cannot speak about the eastern or southern states as I do not feel that I am qualified to know conditions in those areas.

How to Stabilize Business

To sum up these remarks, I believe there are several things that could be done that would help stabilize the whole meat production business from the producer's standpoint. First, more feeders should modernize their feeding practices. They should be encouraged to do a better job wherever possible. They have their home-grown rough feeds which they need to consume. They could feed a few more cattle and each animal would eat less per head of these cheap growing feeds, and they could feed a little more grain to a larger number and put more finish on what cattle they feed, thus raising them in grade where they would make the feeder more money and be more desirable from the packer's standpoint. With the present tendency for meat to be distributed in larger and larger quantities by chain stores, where they demand uniform grade, uniform weight, and not too high a degree of finish, the packer should encourage the feeder to produce the kind of meat that you need in volume.

A good packer buyer will show the commission man or the feeder the kind of cattle that he wants, or point out where the feeder could have fed the animals for a few days longer, raising their grade and their price several cents per hundredweight, or perhaps if they have been overdone and are wasty, which is often the case, it could be pointed out that the animal should have been sold a month or two before, and thus conserve feed which should have been used for another bunch of cattle. I think there is a great opportunity on all markets for this type of relationship between commission men, feeders and packer buyers. The tendency at the present time is too much on the part of the packer to try to take off too much in one day, or the commission man to put on too much in one day.

The violent fluctuations of the market are not healthy—both sides are to blame on this. I believe most farmers read the daily or weekly livestock papers that are issued on the markets where they ship. If there were articles, stories, etc., in these papers regarding the activities of certain shippers to the market, it might influence some feeders to do differently. Too many feeders are inclined to think, "I can't do that because I have a different kind of feed," rather than trying to study how they could adapt their type of feed or fit in the other fellow's ideas to mesh with their own ideas, and thus improve what they are doing—perhaps not copy the other man, but definitely they could improve over their method of operation. The point I mentioned a moment ago—I do not think that the average cattle feeder realizes the strong demand for uniform grade, medium weight cattle in approximately "A" grade condition which is where the big demand for the chain-store lies. More emphasis could be placed upon this type of production, and less said about the market toppers. These few loads give everyone a false impression of cattle and beef prices. The cattle feeder is frowned upon as making too much money—the packers are frowned upon because you are supposedly getting rich, and most

Conventioneers Always Find Time For Chatting

1. Left to right are S. C. Freedman, Jones & Gazarian, Inc., Cambridge, Mass., and Mel Darack, Dirigo Sales Corp., Boston, Mass.

2. Ernest Draheim, Daniels Manufacturing Co., Rhinelander, Wis.

3. V. L. Elias, sales engineer; M. B. Green, general sales manager, and H. H. Kolbo, all of U. S. Thermo Control Co., Minneapolis, Minn., pictured in the firm's hospitality room.

4. Herman C. Schmidt, chairman of the board, Cincinnati Butchers' Supply Co., Cincinnati, O.; E. H. Hickcox, secretary, Smith Packing Co., Nashville, Tenn., and Walter Hammann of the Chicago office of Cincinnati Butchers.

5. D. J. Kennedy of the Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich., and Frank N. Davis, *The National Provisioner*.

6. Arthur G. Pearson of the AMI purchasing department visiting with S. X. Goldfarb and L. Goldfarb of the Cincinnati Cotton Products Co., Cincinnati.

7. C. W. Ashlock of the York Corp., York, Pa., with J. A. Julian, plant engineer, Oscar Mayer & Co., Chicago, and R. E. Miller, sales department, York Corp.

8. R. J. McLaren, architect and engineer, Chicago, with John A. Dupps, president of John J. Dupps Co., Cincinnati.

9. Bob Meidel, Midwest representative; F. Epstein, president, and John H. Feyl, sales manager, all of the First Spice Mixing Co., New York City.

10. Harvey W. Wernecke, manager, advertising sales, *The National Provisioner*, shown between Mr. and Mrs. Harold E. Smith. Smith is vice president of John E. Smith's Sons Co., Buffalo.

11. I. Heymanson, president of the Atmos Corp., Chicago, with H. Smith Wallace of the advertising staff, *The National Provisioner*.

12. Frank J. Pla, sales manager, Wekesler Thermometer Corp., New York City.

13. H. B. Howe, president, Howe Ice Machine Co., Chicago, gets together with Fred C. Berk, Henry Vogt Machine Co., Louisville, Ky., and W. W. Morgan, Arctic Engineering Corp., Chicago.

14. Norman Gross, Paul Lewis Laboratories, Milwaukee, Wis.

15. J. C. Mellon of the French Oil Mill Machinery Co., Piqua, O., with Edward G. Richter, owner of Edward H. Richter & Sons, Springfield, Ill.

16. Otto Meyer, owner, Iron River Provision Co., Iron River, Mich., and A. Denholm, representing the Denman Tire & Rubber Co., Warren, O.

17. John Terry of William J. Stange Co. with W. E. Kicker and B. R. Chapman of Custom Food Products, Inc., all of Chicago.

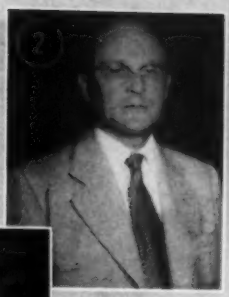
18. George S. Wiedemann of the Wood Shovel & Tool Co., Piqua, O., pauses in the exhibition hall to light up a smoke.

19. F. W. Griffith, vice president; C. L. Griffith, president, and M. C. Phillips, vice president, all of the Griffith Laboratories, Inc., Chicago.

20. J. R. Lostro, engineer, and Roy J. Tate, sales engineer, with Sperti, Inc., Cincinnati, O.

21. John A. Heinzelman and his father, C. J. Heinzelman, both of Buildice Company, Inc., Chicago.

22. Wm. Roegelein, president, Roegelein Provision Co., San Antonio, Tex., and Dr. A. O. Lundell of The Allbright-Nell Co., Chicago.



of the propaganda comes over the top loads of cattle which we in the industry all know amount to so very little.

I would like to see colleges conduct experiments on different lines at least as our western colleges do. None of our schools conduct vitamin tests as to whether Vitamin A secured from dehydrated alfalfa is the big benefit that we are getting from feeding it or whether it is the dehydrated hay itself; perhaps synthetic Vitamin A or the concentrated shark-liver oil Vitamin A would do just as much good, or perhaps even better. If this type of concentrated vitamin were used, would we have to use roughage? As I mentioned before, what about all the various complex "B" vitamins? Astounding things have been done with them in humans, and a great deal has been done in poultry feeding. There are untold possibilities for the colleges to experiment with. Perhaps you men with your influence or by giving them some assistance, financial or otherwise, could influence some experimenting along these lines, or perhaps your own research departments could do some of it.

We need to have feeding experiments made to show how long a feeding period it takes to produce certain, say "A" grade of cattle, dressing 60 per cent. A few of us know about what it takes, as I originally mentioned, but the small feeder has no means of gauging how long all of this takes. Colleges should be in position to furnish this information. A great many feeding operations could utilize their rough feeds early in the feeding period; then switch to a more concentrated feed and produce one crop of cattle, saving back part of their roughage for a second turn, and then finishing the second bunch. This would give them two turns at the market—would help hedge the farmer's bet—would stabilize the amount of beef production from month to month from your standpoint, and a great deal of this could be done if it was encouraged. Instead of this, the ordinary college test tells the farmer that he should feed all of his roughage and buy as little as possible to supplement it. I do not believe this consistent with modern production methods in any line of business, or with the modern demand for the type of beef that you have.

To my knowledge, there have never been any tests made to show the true economical limit where grain can be fed. We know that if a motor is run beyond its rated capacity for too long a time, it will burn up, and we know that it is most efficient at a certain point, but I do not believe that we have this information about cattle in the feed-lots. Tests could be set up to show various combinations of feeding and their results. Most tests show the cheapest cost of gain, but oftentimes these animals sell at a lower price and they do not make the net profit that some of the animals showing a higher cost of gain do.

In closing, I think that you can depend upon the fact that livestock feeders all over the United States are going to actively continue to give you a better and a more improved product to sell. I believe we are just beginning to modernize livestock and meat production.

CHAIRMAN FOSTER: We now have a man speaking from the farm right next door, Mr. Charles B. Shuman, president of the Illinois Agricultural Association. Mr. Shuman has a Masters degree in agriculture from the University of Illinois. He is a practical farmer and he has a message which I am sure will be very timely to all of us.

(SHUMAN ON PAGE 169.)

ADVERTISING AND SELLING SESSION DRAWS LARGE CROWD

Some of the packers and industry men who crowded into the meeting hall for the general advertising session are shown here. Those in attendance heard about new plans for meat educational advertising.

THEY MADE THINGS GO

1. Mrs. and Mr. Louis Isaacs, general manager, Colonial Provision Co., Boston, Mass.

2. Left to right: Hubert Schaefer, Hygrade Food Products Corp., Detroit, Mich.; John A. Dupps, John J. Dupps Co., Cincinnati, O.; Mrs. Hubert Schaefer, Detroit; Christian Finkbeiner, vice president, and Otto F. Finkbeiner, sr., president, Little Rock Packing Co., Little Rock, Ark., and Willibald Schaefer, president Willibald Schaefer Co., St. Louis, Mo.

3. Frank Flynn, Union Stock Yards & Transit Co., Chicago.

4. Left to right: George G. Abraham, president Abraham Bros. Packing Co., Memphis, Tenn., with Walter A. Netsch, vice president, and W. S. Shafer, vice president and general sales manager, Armour and Company, Chicago.

5. O. G. Emge, president, Emge Packing Co., Inc., Fort Branch, Ind., with H. P. Henschien of Henschien, Everds & Crombie, packinghouse architects of Chicago, and George Munce, manager of branch plants for Kingan & Co., Indianapolis.

6. Harry J. Devereaux, president of the American Wool Council and vice president of the National Wool Growers Association, with E. N. Wentworth of Armour and Company's livestock bureau.

7. S. Teitelman, manager of the sales research department; R. H. Borchers, of the Pittsburgh office; J. J. McEncroe, manager of pork provision sales, and J. Senko, Chicago district manager, all of Armour.

8. Among the Hygrade Food Products Corp. representatives were: J. W. Robinson, of the Chicago office; I. Schlaifer, Detroit office; Leo. S. Joseph, New York office, and H. L. MacWilliams, Mishawaka.

9. Ervin M. Mintzlaff, Shawano, Wis.; J. M. O'Connor, Borgs & O'Conner, Washington Court House, O., and Fred Gunkel, vice president, Oscar Mayer & Co., Madison, Wis.

10. D. S. Becker, general superintendent's office; E. Doughty of the research laboratory, and F. Cross of the general superintendent's office, all of Wilson & Co.

11. R. E. Pratt, owner, Pratt Packing Co., Sulphur Springs, Tex.

12. L. E. Kunkle, of the meats laboratory, Ohio State University, and Robert Snapp, Pfaelzer Bros., Chicago.

13. John Terry, Wm. J. Stange Co., Chicago; A. V. Ross, manager, and Henry L. Coffin, president, Gibson Packing Co., Yakima, Wash.

14. Frank C. Raney, director of purchasing, John Morrell & Co., Ottuma, Ia., and Helen Peret, associate editor, *The National Provisioner*.

15. F. M. Legenza, purchasing agent, and J. J. Hewitt, advertising manager, Agar Packing & Provision Corp., Chicago.

16. W. C. Kruger, Stokely-Van Camp, Indianapolis, Ind.; C. W. Beilfuss, president, Derby Foods, Inc., Chicago, and Charles Manaster, United Packers, Inc., Chicago.

17. Old-timers J. J. Vollertsen, retired head of Armour and Company's research department, and L. M. Tolman, retired from Wilson & Co. technical division.

CONVENTION ISSUE

GLOBE
CHICAGO

THANKS FOR COMING!

It was a great pleasure to welcome you to our headquarters in the Governor's Suite at the recent A.M.I. Convention in Chicago. We hope you got a lot out of the meetings—our function was to fill in your leisure moments to make your stay more pleasant.

We know you found the meetings extremely worthwhile, but the best part for us was to meet you face to face and help you to forget business and look on the lighter side of life.

When you think of conventions—think of Globe and

REST — RELAX and REFRESH

R. L. GAMBILL, *Vice-President*

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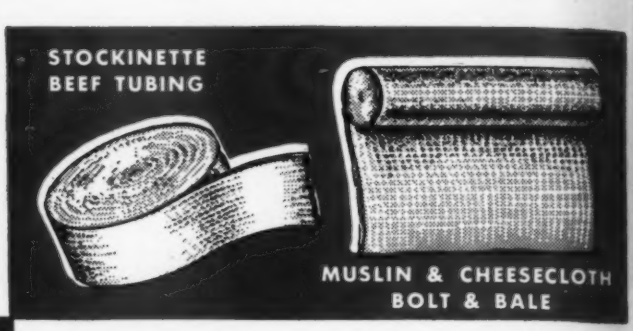
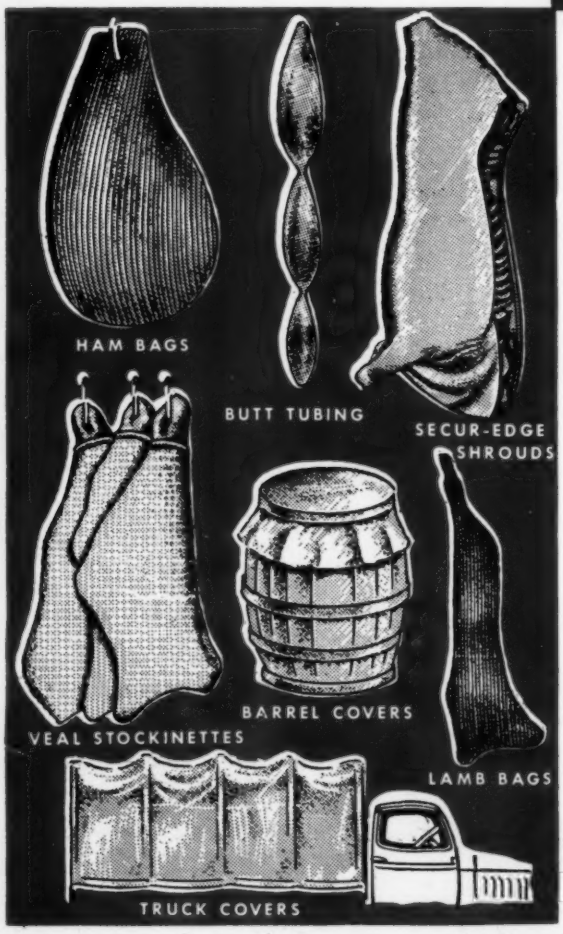
Give your quality meats the protection they deserve. Order EAGLE Covers for positive protection from dirt and handling, and for eye-appealing quality.

Selected materials and modern manufacture count for the ever increasing demand for EAGLE Covers. Let us know your requirements.





BARREL COVERS	BEEF CLOTH IN ROLLS
BOLOGNA TUBING	BURLAP BAGS
CANVAS PRODUCTS	CATTLE WIPE
CHEESECLOTH	COTTON BAGS
FRANKFURTER BAGS	HAM TUBING
*FRIDGI-NETTE FOR FROZEN POULTRY & FOODS	
POLISHING CLOTHS	SECUR-EDGE SHROUDS
STOCKINETTE BAGS	TIERCE LINERS
TRUCK COVERS	SHROUD PINS—SKEWERS

*NEW AND IMPROVED STOCKINETTE FOR FROZEN FOODS, MANUFACTURED BY EAGLE BEEF CLOTH CO.

Manufactured by

EAGLE BEEF CLOTH CO.

276 NEWPORT ST., BROOKLYN 12, N. Y.

Makers of Textiles for Meats Since 1929

AGENTS IN PRINCIPAL CITIES

WHAT FARMER WANTS FROM MEAT INDUSTRY TOLD BY BEEF FEEDER

CHARLES B. SHUMAN: I could come here this afternoon and tell you that it is a pleasure for a farmer, a representative of a farmers' organization, to speak to you folks who handle a large percentage of the total value of his products. I could come here and pat you folks on the back and say that everything was lovely and talk about cooperation between various groups and I suppose that would be appropriate. However, I don't believe that the 145,000 farmers in Illinois who are responsible for my position are interested in my coming here and patting you on the back. So I am going to talk plainly as I see it and as I think the farmer sees the situation, as he thinks about national problems and the problems of distribution of his products.

C. SHUMAN

I am sure that our interests are common. Our viewpoints may vary. I know that in trying to speak from the farmer's viewpoint and reflecting to you what the farmers might think, I am treading on a dangerous ground because no two of us think alike, whether we be farmers or meat processors or whatnot.

I am in a position similar to the spot I was in sometime ago. I have told this story so often I sometimes almost swear that it is true.

My wife and I are blessed with twin boys. A few years ago they started to school for the first time, and we met the teacher who was to have them that fall in the school. I wanted to make a good impression on her and give them a good start.

I said, "Miss Smith, I am very happy to meet you, I am the father of the twins you are going to have this fall."

Well, there is nothing wrong with the statement.

And there may not be anything wrong with the statement of some of the things I say, but the interpretation that can be put on them is diverse and varied.

Common Interests

I think first of all we ought to look at things which we have in common as farmers, as processors and distributors of farm products and businessmen.

A farmer today considers himself a businessman, and I am sure most people who have in some way or another had farm experience, either in their youth or later on as an experiment, recognize that farming today to be successful must be a business. It is a highly competitive business, one which has in it all of the factors any other business has, factors which determine whether a man is going along and continuing in the business of farming. They are just the same factors that you have in your business, and the same degree, or more if possible, of competition.

The farmer is interested, the same as you are, in the efficiency of his operations and upon the volume of his production and upon holding costs down and getting a high return for the result of his work. With that in common, I think farmers, as a group, look upon national problems in the same way in which you folks look upon these same problems.

We don't always see alike because national problems don't affect us all exactly alike. However, fundamentally, there is very little difference in the way in which a farmer or a businessman looks upon the outstanding problems which are facing the people of the United States today.

I think we could find a lot of things in common in that respect if we look back in the past history of agriculture and our struggle for a parity position with other industries. We would find that many of the mistakes which we made in our efforts to attain a comparable position with others are the same mistakes which industries made or are still making or labor made and is still making.

Agriculture Not Organized

We went through a lot of the same process of thinking and came out with some of the same conclusions. For instance, in 1921, we in agriculture had a disaster that hit us first long before it hit most of industry. Agriculture was not organized and we looked around and saw other groups were organized. We immediately said, "That is one of the differences. That is one of the things we must correct."

Just as you have found it is necessary to have organization in your industry, so have we found it was necessary in ours—just the same as labor found it was necessary to organize.

TWO FRIENDLY COMPETITORS

Edward H. Oppenheimer (left), vice president, Oppenheimer Casing Co., Chicago, and his brother Seymour Oppenheimer, president, Transparent Package Co., Chicago, are pictured here trying to sell one another on the merits of their respective company's products.

We are also faced with the problem, and it is still a great problem, of how we can continue to run an agricultural economy of abundance and unrestricted production in a nation and in a world where everyone else is controlling production.

The first answers we came up with are along the same lines as the answers which industry and labor had proposed to the same problem. We followed the same route everybody else has gone through in the history of the economy in this country. If you look back upon the devices which agriculture used, they are pretty much the same tools, the same means, which were used by other groups.

Tried Production Control

In other words, we recognized that we had something to contend with which was beyond our own individual farms and beyond our own individual efforts, so we got together and organized for production control with the help of the government in very much the same way that business and industry has had help from the government.

I am not making any defense or apology for the past mistakes of agriculture. They are little different from the past mistakes and progress of industry and labor. They were based upon the idea that you can raise prices by controlling production. Everyone in the industry and in labor knows that this is the history of organized industry and organized labor—production control to raise prices. Agriculture tried the same system but we found it more difficult to make it work on the farm. We found it didn't work the same as it had in other industry where controls were more definite. We would like to abandon production control today. We would like to forget about some of the old controls and restrictions we tried in that period, but what do we see when we look around? It is not a happy situation.

We see the same kind of economy we saw in 1921 to 1929, the kind of economy where every organized group in America, including labor and industry, is still using the same answers to the same problems—the answer of reducing production to control prices.

I don't think we can call it by any other name than production control and while many in this room may condemn production control by farmers, I don't think you should condemn in any one group what you condone in another. Labor hasn't used production control quite as long as industry, but they are commencing to catch on and the tactics they have used in recent years are nothing less than drastic production control. I repeat, we are forced to look upon a situation that is not too happy.

We would like to go the route all the people are talking about of abundant production. There is a lot of talk about it, but not much is being done. Agriculture and some of the associated lines

Bulls See **RED?**

Bulls are color-blind. Scientists have disproved the theory that they "see red." Famous matadors agree that when "El Toro" blows his top at sight of a waving red cape, it's the waving . . . not the red . . . that riles him.

COARSE SALT FOR SAUERKRAUT?

Another popular misconception is the belief among some makers of sauerkraut that they must use the very coarsest crystals of salt. Scientists *know* that light, bulky salt (such as Diamond Crystal's grain for the purpose) spreads more easily in the vat. This results in uniform salt distribution and much better control of sauerkraut fermentation.

DO YOU WANT FACTS?

For sauerkraut or any other "salt minded" product, Diamond Crystal has just the right grain and grade for you. If you want facts about salt requirements for your processes, just write our Technical Director. He'll gladly recommend the correct grade and grain of Diamond Crystal Salt for best results. Diamond Crystal, Department I-16, St. Clair, Michigan.

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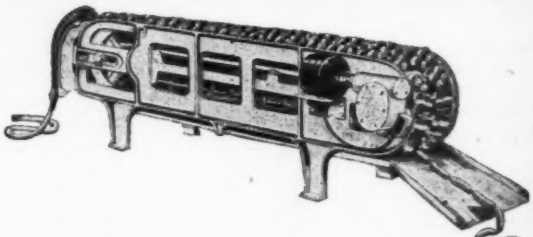

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FAMCO DIVISION
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This Condenser INCREASES Refrigeration Plant Capacity

EXCLUSIVE AEROPASS CONDENSER FEATURES

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- "Oilout" keeps out oil and dirt.
- "Balanced Wet Bulb Control" keeps head pressures down.

Dirt and scale in condensers is the great enemy of efficient refrigeration systems. Not only is it the greatest trouble-maker for the operating engineer, but it also cuts capacity and wastes power.

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These benefits LAST because the patented Niagara "Duo-Pass" lowers the refrigerant temperature to the point where scale cannot precipitate on condenser tubes, assuring an always clean, always efficient condenser.

Write for Descriptive Bulletin 103-NP.

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PREFERRED PACKAGING SERVICE

of agriculture are the only places where we are actually producing abundantly and have so far only talked about production control.

The efforts of the 30's were not very effective. The total maximum reduction in any year under AAA crop control was never more than 8 per cent of our production, while industry cut production approximately 50 per cent in many lines.

No Likely Alternative

Present trends worry farmers because we realize that while we may not want to go back to those control tactics, sometimes you fight a forest fire with fire. Despite the fact that we do not want to go back to those kinds of conditions and those kinds of tactics, we may be forced to by the fact that we have no other workable alternative. We may be forced to return to the type of thing which none of us like, but which we have to admit is a case of fighting fire with fire.

Production control from the farmer's standpoint is not a very pleasant thing. I do believe that we are making a definite effort though to do something else, to approach it from a different light.

What are some of the things that can be done? I have been talking about production. Agriculture is a minority group. If the other groups which have a majority of the population, which have the major part of the production facilities in this country and which pretty much have the political control of this country today would think in terms of abundant production and do something about it, agriculture might be able to continue to produce abundantly. I think that is the key to the general well being in this country.

The second thing which we are interested in, and one that is fully as important and goes right along with abundant production, is the matter of general price level stabilization.

I think we can recognize that agricultural prices have been at a disparity with other prices. We think there has been a price disparity, but the biggest thing that has been hurting agriculture has been the longtime general declines in price levels, the wide fluctuation from the boom to the bust. That is the thing which concerns us today.

Price Stabilization

We think something could be done about stabilizing price levels. Monetary and fiscal policies of the nation have a bearing on these things; federal spending, the budget, credit policies and many others.

Agriculture was one of the leaders in the fight in Congress for more economy in government, for lessening the government's expenditures. We opposed the proposed government tax reduction on the grounds that now is the time to pay off the federal debt and now is the time to have high taxes in this inflationary swell through which we are passing.

What about soil conservation? I am going over these points hastily because on any of these we could take a long time and have an interesting discussion. I am just throwing out some viewpoints. After all, you know, our viewpoint is influenced by our perspective, the place from where we are looking.

I heard this story about a righteous lady who had registered in a hotel and soon after going to her room called the manager and said she would like to have him come up there immediately as a man across the court in another room was indecently exposing himself. He hurried up and there was a fellow across the court shaving in front of the window so he could get the light. The manager said, "There is nothing wrong with that fellow shaving. I don't see how you can say he is indecently exposing himself."

She replied, "You stand up on that dresser and see what you can see."

That is a case where one viewpoint is different from another. My viewpoint as I stand here is different from yours, of course. And, any two of us would have different vantage points and places to look and point out different things. As we, as farmers, try to look at the national picture, we see first the matter of inadequate production that is hindering us and hindering all America. Then we see this general price level problem, the wide fluctuations and booms and busts. We are certainly up at a pretty high level now. Something is going to happen.

A third problem we see concerns the nation as a whole, that is the matter of conservation of natural resources. It is a national responsibility, true, but the nation can't expect to conserve the fertility of each individual farm. About all that the nation can be expected to do is to do the kind of thing which through our extension service in agriculture we have been trying to do for years; to bring to the attention of the farmers and the owners of land, the principles of soil conservation. Government responsibility is to carry the educational program to try to cultivate in farmers the desire and the "know how" to do something about this problem.

We are already wearing thin. This soil of ours is going and going fast and every man who lives in the country and experienced the rains this spring knows we are on pretty thin ice. The time is later than we think. Farmers know that they have a responsibility that is beyond the national responsibility. We, as farmers or farm owners, cannot expect the government to come out to our individual farms and do the work, the planning, all the engineering and everything else that is required by a good conservation program for each individual farmer in America. The cost is prohibitive. It would take too long. Speed is important.

Soil Conservation Vital

The thing I am trying to point out is that the first responsibility is on the individual farmer and farmer owner. Through extension service and land grant colleges, we can bring to the farmers the know-how and the desire to do something about soil conservation. The national responsibility is to see that the farmer gets a high enough price for the products of his soil so that he can afford to maintain its fertility. If farmers don't receive a parity price that gives them a parity position with other groups, there are only two places from which to make up this discrepancy. One is out of the farm family's standard of living. He can cut down his standard of living and continue to sell at a price lower than he should get, or he can mine it out of his soil, or do both.

In the period from 1921 to 1939, the farmers had to do both. They didn't have a price level comparable to the price level of other groups and they had to mine that fertility out of the soil and they had to take it out of their standard of living. Now, if that thing should repeat itself, it is going to be disastrous for this country. We have gone through several of those cycles and the soil is down to the place where I doubt if it will stand another one of those soil mining cycles.

It is the responsibility of this country to see that agriculture has price levels sufficiently on an equality and parity basis with other groups that it can

OHIO-KENTUCKY TRIO

C. E. Field (left), president of the Field Packing Co. Inc., at Owensboro, Ky., with his right hand man, E. L. Neubauer, vice president of the Kentucky meat firm, and R. G. Thomas, vice president of the Lima Packing Co. and a strong believer in cooperative effort. Mr. Neubauer is especially interested in incentive systems.

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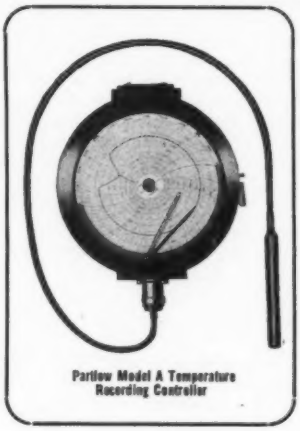

Partlow Model A Temperature Recording Controller

This Partlow Model A Temperature Recording Controller is used to control, and at the same time record, the temperature of gas, oil, steam or electrically heated smokehouses, ovens, kettles, solder pots or other heated processes which operate below a temperature of 1000° F.

Available in five temperature ranges
0 to 150° F.—50 to 350° F.
100 to 450° F.—100 to 650° F.—100 to 1000° F.

The red pointer is set at the temperature desired and from there on the operation is automatic.

Three types of switches, normally "on," normally "off," or single pole, double throw are available in capacities up to 500 watts A.C. 50 watts D.C. for operating solenoid valves, heating elements or relays for controlling larger loads and motors.

The same instrument, without the control switch, for temperature recording only, is also available.

Ten inch paper charts are driven by an electric or spring operated clock as specified.

The standard capillary length of the element is five feet but longer lengths can be furnished.

LIST PRICES

Model A Recording Controller; see Bulletin 901-A.
Wall Type.....$90.00 Flush Type.....$105.00
Model AP Recorder only; see Bulletin 900-A.
Wall Type.....$65.00 Flush Type.....$80.00
Send for Bulletins 900-A and 901-A.

THE PARTLOW CORPORATION

Manufacturers of Partlow Temperature Controls, Safety Gas Valves and Gas Burning Equipment

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...less Steel top is strongly reinforced to withstand heavy usage ... ...dy construction of the underneath structure and supports eliminate ...shimmying and sagging of the work surface. Shelves and partitions ... available in stainless steel or galvanized sheets as you prefer. ...ree to five-week delivery.

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maintain the fertility of the soils and conserve our natural resources.

There is one other thing that worries farmers. That is the matter of the cost of distribution. The farmers have hollered about it and cussed about it for generations and I guess they have not done too much about it. The facts show that the cost of distribution is one of the most inflexible items in the total cost of producing any of the consumer goods in America. It is true that the cost of distribution does vary some, but comparatively it does not vary with the cost of production or with the retail price. It stays relatively inflexible. As prices go up, it usually increases. Our experience has been that this increased cost of distribution during high prices carries on down unchanged during low price times.

Now that is not entirely true. We don't want to be extremely critical. We recognize and everybody recognizes that consumers and consumer demand sets farmers' prices. But, the cost of distribution has been such, and the distribution system such, that those consumer demand changes have not been adequately reflected.

I am not talking about meat in particular. I am talking about all farm products now. I see some of the fellows commenced to become a little alarmed. Meat has perhaps been the least to be criticized in some respects as compared to some of the others. But, I am talking about general farm commodity prices.

The cost of distribution has been too inflexible and too fixed. Consumer demand sets the price. But, through the system which we have, we haven't had those changes reflected to farmers quickly enough nor in the degree to which they should be reflected.

Milk Cost an Example

I want to cite two examples. Right today, the price of milk to the farmer is down materially. I can't give you the exact figures, but it was down considerably this summer. Yet, most of you who buy milk know that the price to the consumer was reduced very little. Percentagewise, the adjustment was about one-third of what it should have been.

I can give you another example in the meat industry of a few years back under the OPA. You will remember a time when we had a situation with heavy hogs and we had a period where you could hardly give away heavy hogs, as far as the farmer was concerned. Yet, the price for pork chops in the city remained practically the same and it didn't make very much difference in that particular period whether they were chops from heavy hogs or light ones. Those are two examples of the thing I am talking about. The reflection of price changes came, but it came very slowly. The reflection of milk price change may come, but it is coming rather slowly. We are not too well satisfied with the distribution system because of its inflexibility, because of its tendency to maintain a fixed margin, regardless of what happens.

Now, what can be done about this? I know this industry and all handlers of farm products recognize some of these problems and you have been trying to do something about them. I take off my hat to the meat industry because you have been trying to incorporate some more efficient factors, factors leading towards greater efficiency in the distribution of meats, and you have done a wonderful job of increasing efficiency as far as mechanics of the industry are concerned. The criticism, though, is still there, that there is not enough being done from enough different angles. There has been too much tendency not only in meats, but in all agricultural distribution industries, to maintain a status quo.

From a farmer's standpoint, we wonder why the resistance. When you get on the operating side, with capital investments and all the other things you have to contend with, it is difficult to do anything but maintain the status quo. That is why we are saying some new ideas need to be injected.

Price And Demand

I think that agriculture has a great interest in this problem of distribution, a great interest because the cost of the product that is finally delivered to the consumer determines to a large degree the demand—the quantity that is used. Agriculture wants to produce in quantity. If we can move the product to consumers at the minimum possible cost, they will consume more. So, we have not only an interest in price which can be reflected by the economy in distribution, but we have an interest in volume.

I am not saying that private industry cannot solve that problem. I think they can. If they will tackle this distribution problem without too many preconceived notions or without the idea that, "here is the way it has always been done and here is the way it has to be done," much can be accomplished. I think that private industry will solve the problem.

The only suggestion I have is that the farmers would like to see some encouragement given to the industry to help do something about this problem of distribution. We have sponsored and secured enactment in Congress of the agricultural marketing research act. That is one way, a very definite way. We hope that some of the activities of the governmental research will be beneficial in finding ways to bring more efficiency in the field of distribution of agricultural products, both directly and by encouraging cooperative research with the various state colleges and private industry into this field.

Consumer Preferences Minimized

We are concerned a little further than that, though. Dr. Craft was talking about the different cuts and the different types of hogs, and how much better some types meet with consumer demand. Yet, today the farmer in Illinois doesn't see reflected any noticeable premium for the type of meat everybody says the consumer wants. We have all heard a lot of talk about how much the consumer wants the lean cuts and this bacon type, but try and market it and see how much premium you get! You don't get enough premium to pay to produce it. So, we are going ahead producing the same old kind. That is another reason I say there is something wrong with the system of distribution. If the consumer really wants that type of meat, the distribution system should reflect to us enough margin that we could afford to raise that type.

The present system tends to minimize differences in consumer wants. Maybe we need some more competition in some fields of distribution.

I hope we don't have government in business or any of that sort of thing. I would like to see the government remove some of the restrictions to competition in business. As a farmer, I would like to see some of these Robinson-Patman laws repealed and some of the Wagner acts repealed. I think maybe we can do something like that to increase competition and have a little more anti-trust and anti-combination activities.

But, if those two approaches—through research and through eliminating combinations—don't succeed, I suppose the farmers will have to do something about it themselves and I hate to face that prospect, but it is here on our doorstep.

Want Price Guarantee

We are not going to continue, as agricultural producers to sit back and take the "status quo" if we are going to produce an abundant suppy in an economy geared to scarcity and control as we have in the past. We are going to have something to say about the distribution of our products. That is the straight talk I promised you to start with. I have no further suggestions or ideas. It is simply that we are face to face with the issue. Agriculture is willing to produce abundantly but if we do we want something in return, some guarantees that we will have a price that will let us not only maintain our standard of living, but will let us maintain our soil.

We are going to have a price and we are going to have reflections of consumer demands to the farmer with an efficient distribution system.

Farmers, I am sure, recognize that the distribution system we have is one which is designed and built to meet certain needs. Now, if it is changed, we have to cooperate with you folks. We are going to have to work together. I can pledge you, as far as our work is concerned, we will work with any group in America interested in doing something in the way of research and improving the system of distribution. It is like everything else; it has served a good purpose. It is not perfect.

(Session 4 on page 184.)

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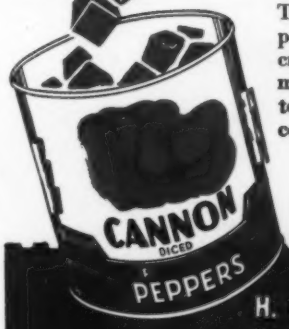

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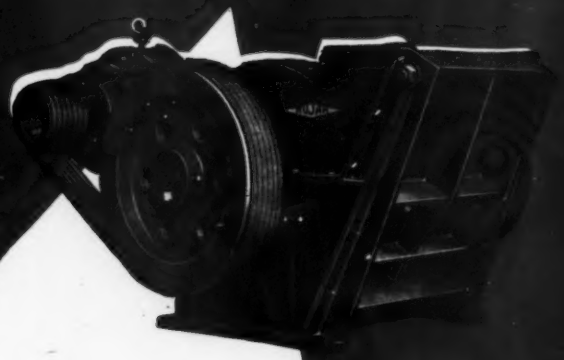

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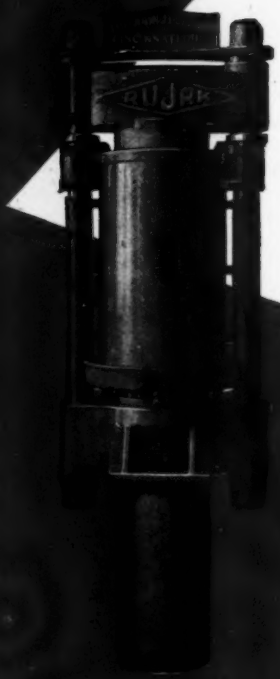
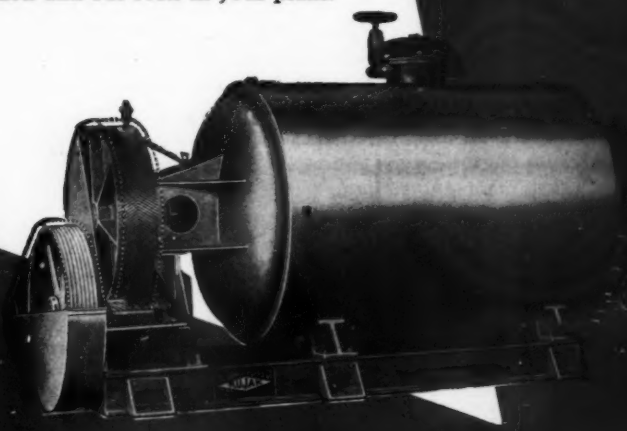




THE JOHN J. **DUPPS** COMPANY

AMERICAN BLDG., CINCINNATI, OHIO

Sessions 4 and 5

THURSDAY, SEPTEMBER 4

MORNING—SALES AND ADVERTISING SESSION

"Tomorrow's Customers"—F. W. Specht, page 184

"What's Ahead for Consumer Buying Power"—Dr. Sumner H. Slichter, page 204

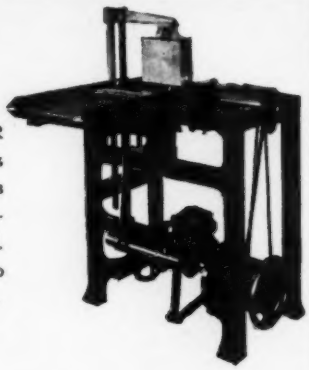
The Institute's Meat Education and Public Relations Program—R. A. Rath, George J. Buchy and Don Smith, page 238

AFTERNOON—GENERAL SESSION

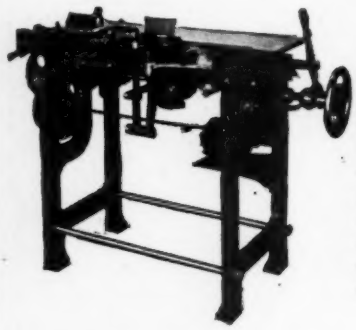
"A Better Livestock and Meat Industry"—John F. Krey, page 243

"Savings Through Institute's Purchasing Department"—Frank C. Raney

"Soils and Livestock Work Together"—Dr. William A. Albrecht



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35–40 cartons per minute. One operator required. Can be made adjustable to set up several carton sizes.



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SPECHT TELLS WHAT LIES AHEAD; HOW MEAT EDUCATION WILL HELP

HARDENBERGH

THE meeting reconvened at 10:10 a.m. on September 4, 1947, with Wesley Hardenbergh, president of the American Meat Institute, presiding as the chairman.

CHAIRMAN HARDENBERGH: I believe we have an exceptionally interesting program arranged for you and I believe you will be interested in every part of it. The first talk is on a subject of great interest to all of you from a sales viewpoint. I will say a little more about that in a moment.

The second talk is going to be by one of the country's outstanding economists who is not only outstanding as an economist, but also as a speaker. The third part of the program deals with the meat educational program and you are going to find that of particular interest because of the new plans that have been made for the ensuing year. I hope all of you will stay through for all the talks because I know you will find them worthwhile.

I am going to be very brief in introducing our first speaker because he is already very well known to many of you. When F. W. Specht approaches a problem, he does it with an enthusiastic aggressiveness which is most pleasant to see. We have had the opportunity of working relatively closely with him during recent years and have been very much impressed by the way in which he approaches problems. He is painstaking and thorough and I am confident you will be keenly interested in his address.

He has given it careful study and thought and in preparing it has drawn on his broad experience and knowledge in a field which he knows exceptionally well. In addition, his position as president of one of the country's leading corporations gives an authenticity to what he will say.

You are all familiar with the old maxim which urges preparation for war in times of peace. In the same way, in these days of strong demand, it seems sound to give consideration to tomorrow's customers. F. W. Specht, president of Armour and Company, will discuss that subject now.

F. W. SPECHT: This convention has assembled in a very optimistic frame of mind. We see a bright future for our industry in every respect. Prospects are for a continued high rate of livestock production. Any setback this year will be due to a reduction in feed available and not to voluntary reduction of breeding stock by the producer. We know, too, that the livestock producers are cooperating by sending us better bred and better fed animals. The people on the farms and ranches are prosperous. For many years they have wanted to improve their breeding strains and methods and now they have the money to do it.

F. W. SPECHT

On the merchandising side we are fortunate, too. Retailers everywhere are enlarging and remodeling their stores, installing new fixtures, better lighting and better arrangements. Further, we see an increasing interest in meat on the part of retail dealers.

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Processed to a correct tenderness in their own juices (no salt added)

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Diced Sweet Red Peppers at their Best

in the retail food field were interested primarily in groceries and meat was a sideline. Recently, however, we have seen a reversal of that trend. I know that all of you who contact the trade will bear me out in saying that there has been a highly increased interest in meat on the part of retail merchants. They are coming to look upon their meat departments as the principal magnet which draws trade into their stores. They will tell you that they put the meat department in the rear of the store because every customer visits the meat department and has to pass all the other merchandise displays to get there.

These are very fortunate circumstances for us. They have come about partly through our own planned efforts and partly because of external events over which we had no control.

There is no particular point in analyzing our present good fortune to determine why we are in such an encouraging position. Our purpose should be, rather, to find out what we can do to protect our gains and enhance our present advantages.

In doing that, we must consider the person who makes all our gains possible —the consumer, our ultimate customer. I know that the representatives of retail dealers in the audience will agree with me that the consumer is the real customer of every good processor. To be sure the dealer is the person our salesman contacts. The dealer gives us the orders for our products and he pays our bills.

Emphasis on Consumer

But, the dealer is actually the buying agent for a group of consumers. All of his actions, favorable or unfavorable, are governed by the people who buy and use our products. The dealer can buy from us only what the consumer buys from him, and every dollar he pays us must come from the consumer. Good relations with our dealers can only be the result of our mutual good relations with the consumer. It is plain that the future prosperity of our business depends upon pleasing the ultimate customer. Her likes and dislikes should be the determining factor in everything we do.

It is just as difficult to define a typical consumer as it is to define the common man. We know certain things about consumers, however, which apply whether they are blondes or brunettes, tall or short, plump or thin. By taking the data available on the women who buy our products in the stores, it is possible to picture an individual woman and talk about her as our customer—*Tomorrow's Customer.*

We shall even give her a name. Since she is tomorrow's customer, we shall call her "Mrs. Tomorrow." Unlike the judges who select Miss America in the bathing beauty contests, we are not interested in Mrs. Tomorrow's physical attributes or what the tape measure says about her anatomy. We are concerned, however, about many other factors in her life which influence her probable actions and reactions as a customer for packinghouse products.

THIS TRIP WILL COST MONEY FOR SOME HUSBANDS

A great many of the industry members' wives took advantage of the activities arranged by the AMI staff. This group was photographed just before leaving for a tour of Marshall Field & Co. where they were guests at luncheon and at a special fashion show.

Mrs. Average Consumer

We have put Mrs. Tomorrow's age down here as 26, and if you think she should be a few years older or younger, that's all right. She was married during the war and lived with her family until Mr. Tomorrow got back from overseas. Now, she's been keeping house with her husband for about two years. We say that she is taller and healthier and we mean by that to call attention to the growing stature of American men and women as revealed by published vital statistics. Mrs. Tomorrow is a bigger girl than her mother was and that is a tribute to improvement in nutrition of the American people. It is a development which this industry can look to with considerable pride.

Next, we find that Mrs. Tomorrow has a high school education, at least. She not only has been taught to read and write but she has had formal instruction in many of the arts and sciences which affect our business. For example, she probably can name all of the proteins and vitamins and tell you what they do in nutrition.

The chances are that she knows more about the theory of cookery and nutrition than her mother did even though she has probably had less practice. Young women today are seldom competent cooks when they get married. They learn the hard way, but they learn fast. They are grateful for any help that we, as food suppliers, can give them.

You will find, too, that Mrs. Tomorrow is almost fanatical on the subject of cleanliness, partly due to her home training, and partly due to instruction in hygiene in school. She will not serve anything to her family unless she is dead sure that it is pure and wholesome.

Then, we point out that Mrs. Tomorrow is American, from the tips of her toe-out shoes to those beauty parlor curls on her head. The foreign-born and foreign-raised women who used to constitute a big part of our market, are vanishing. Out of this splendid, virile stock, we are building a better race of Americans, and their food habits are changing.

So much for Mrs. Tomorrow's personality and background. She's really a smart girl and it is a pleasure to do business with her. She reads newspapers and magazines, she listens to the radio, and, as she gets older, she will become a still more intelligent buyer. You may

WHO TAKES THE PICTURE OF THE CAMERAMAN?

With Jean Clohesey, associate editor of the NP taking down notes, and the popular expert Art Mayer, veteran NP convention photographer, doing a little shooting, somebody came up behind them and took a picture of the magazine's service desk and its camera team.

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- *increase flavor-appeal*
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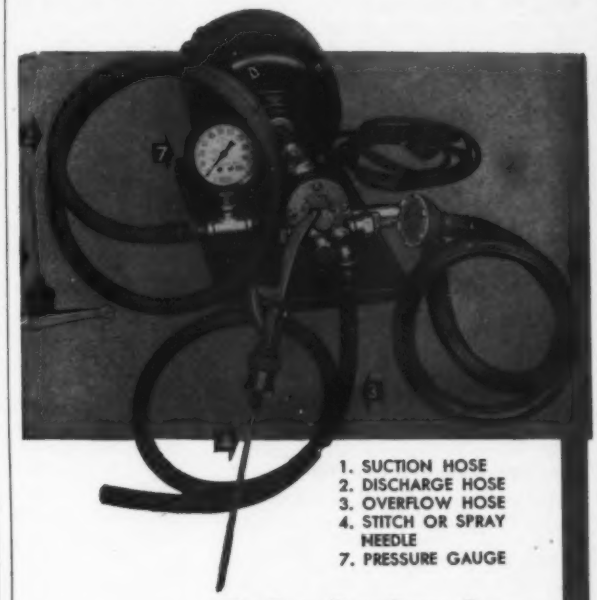
"BIG OR SMALL, WE SERVE THEM ALL"

All our Spices are safe-guarded by the famous Electronic Pasteuray treatment.

The Salem Sure Cure
POWER PICKLE PUMP



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The Sure Cure Power Pump is a *simple, compact* unit designed to meet the requirements of the Packer for pumping and curing all cuts of meat . . . sweet-pickled or smoked. The pump is equipped with two needles—an artery and a spray needle. It speeds up curing action, yields better pickle distribution and saves time and effort . . . produces exceptionally flavored meats at lower costs.

GENUINE WAGNER SAUSAGE STUFFERS

A hand stuffer that has a world wide reputation for efficiently stuffing meats in casings. Wagner Sausage Stuffers are sturdily constructed . . . cylinders are made of heavy steel with malleable mountings, both being heavily and smoothly coated with tin. Three sizes are available.

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SALEM TOOL COMPANY

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fool her once, but you won't fool her twice.

She is "organized," too. There are 200,000 women's clubs in the United States and their members can be very vocal in their demands on industry. Women voters outnumbered men voters in 1946.

It says on our chart that Mrs. Tomorrow has two children. That makes her the buyer for an average family of four. Remember, however, that this is the average household. In 1946, out of nearly 38,000,000 so-called families: 10% of the families meant 1 person living alone; 27% were twosomes (the largest group); 22% were threesomes; 18% fouromes, and 23% of the families were of five or more persons.

Now, let's take a look at Mrs. Tomorrow's finances for they are extremely important to our business. She is the source of our income. Salesmen and dealers cannot be very successful unless Mrs. Tomorrow has the money to begin with.

Average Consumer Income

The most recent studies made show that the average wage earner's gross income is $2,750 a year. This figure is as of January 1, 1947, and it is probably somewhat higher today. We show here that the government collects a tax on that income of only $88. The amount is relatively low compared to the percentage some people pay. Mr. Tomorrow has four income tax exemptions, and the law recognizes that he needs most of his money to take care of his family.

The family has a net spendable income of $2,662. Mrs. Tomorrow's share of the $2,662 is 85 per cent. Some authorities say that women spend 90 per cent of the national income, but we prefer to take the more conservative figure and put $2,262 in her pocketbook.

How much of this does she spend on food? Department of Agriculture estimates are that urban families in this income bracket average will spend 28 per cent of their net incomes to set the family table. That amounts to $745 a year, or $14.33 weekly.

Mrs. Tomorrow may not be an heiress, but she certainly has a bank account which is well worth attention. I should like to call your attention again, at this point, to the figure of $2,262 representing Mrs. Tomorrow's 85 per cent share of the family income. Here is the reason why. When you visit Mrs. Tomorrow in her home, you find out some other things about her which are very interesting to our business.

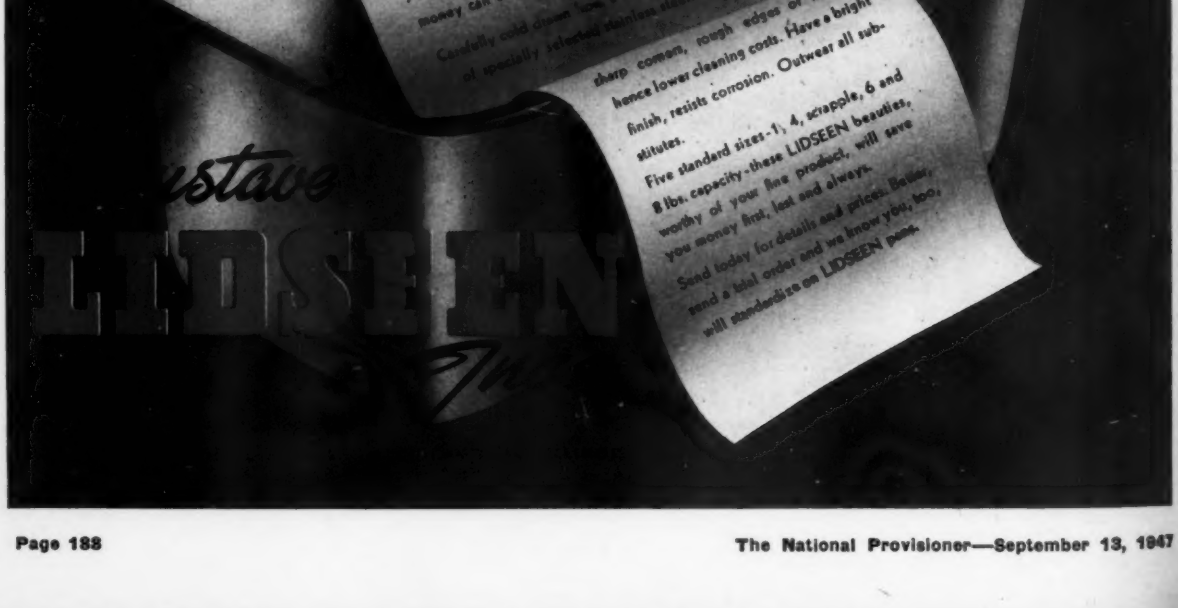
She buys, and is going to buy, many things other than food. First, she is going to pay more rent, or buy a home. The family is living in four rooms now and, with the children growing up, and other arrivals in prospect, they would like at least six rooms.

They have a car about ten years old. They will want a better car and, sooner or later, they will get one. Mrs. Tomorrow has a washing machine and a vacuum cleaner. Eventually she hopes to have an electric ironer, and a dish washer. She has a gas stove which has seen a lot of service and she would like one of those bright, new, shining, white porcelain affairs with automatic regulators and things of that sort. She has a refrigerator, but she has seen the new freezers in the stores and it is a good bet that she will eventually get one.

There are several things we learn from this survey of Mrs. Tomorrow's home. First, whether her home is the present four rooms or the hoped-for six rooms, it is a much smaller home than the average a generation ago. While Mrs. Tomorrow's home is smaller than her mother's, it is more efficient, with many labor-saving devices. The young lady is accustomed to home efficiency and she wants the same efficiency in the food she buys for three meals a day.

The other factor in this home picture relates back to Mrs. Tomorrow's finances. We said that she had $14.33 a week to spend on food. As the years go by, Mr. Tomorrow will probably be making more money and she will have even more to spend on food if she wants to. But there is no assurance that she will give the food industry that 28 per cent share of her budget. All of the other wants of the Tomorrow family are pressing competition to our business.

We haven't mentioned such things as


THIS MEAT MOLD PAN Has Set
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Leading meat packers have long recognized the economy and efficiency of these stainless pans. Approved by The American Meat Institute. The best that money can buy.
sharp corners, rough edges or seams, hence lower cleaning costs. Have a bright finish, resists corrosion. Outwear all substitutes.
Five standard sizes-1, 4, scrapple, 6 and 8 lbs. capacity-these LIDSEEN beauties, worthy of your fine product, will save you money first, last and always.
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clothing, furniture and entertainment, as other things Mrs. Tomorrow wants in addition to good meat for her family. Protein foods, other than meat, are available at prices which permit Mrs. Tomorrow to hold out more of her income to buy things she and her family want. Actually, we are in constant competition, not only with all other foods, but with everything else that this lady buys with her $2,262 a year.

Selling Job Necessary

Gentlemen, it is plain that there is some wooing to be done if this industry is to continue prosperous. We have to make our merchandise more attractive to Mrs. Tomorrow than the other fellow's. It is so easy to lose this lady's good will by inattention and there is such a great opportunity today to gain her favor.

You are all familiar with the advertisements used by the Institute recently which point out that the profit we make on meat amounts to only 7c a week per family. That is 7c a week against the family's $14.33 a week food expenditure. A cent, or even a half-cent, one way or the other, can make a lot of difference to us.

The sad truth is, too, that the lady we are talking about doesn't think too well of us at the moment—or doesn't think of us at all. Elmo Roper has found, for example, that Mrs. Tomorrow believes we are making a huge profit on every dollar she spends for meat. The opinion polls have demonstrated that there is a big job to be done in replacing suspicion and doubt with confidence and good will.

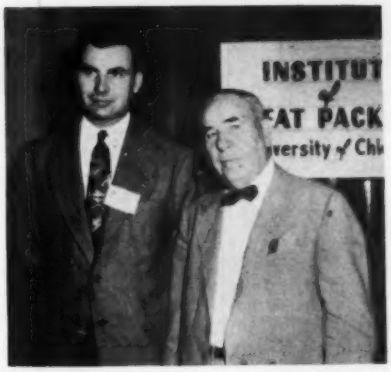
How are we going to do it and where are we going to do it? To answer that we shall have to look at the dealer's store where Mrs. Tomorrow buys our products.

One thing is certain. The lady is trading in the finest stores in the history of our business. Our retail food dealers are the most progressive group of any on Main Street, and we have figures to prove it.

Combination Stores

Most of Mrs. Tomorrow's trading is done in complete food markets, so-called combination stores. Back in 1939, the last government census reported that combination stores did 50 per cent of the food business. While we have no government figures since 1939, we know that the trend toward combination stores continues. *Progressive Grocer*, for example, reported an increase of 20 per cent in combination store sales last year against an increase of only 10 per cent in sales of groceries without fresh meats. Meat markets have expanded their lines in many cases to include groceries and produce.

Mrs. Tomorrow's store is bright, clean and modern. We used to hear merchants say, "I don't want my store to look too fancy." They were afraid that a prosperous, orderly appearance would lead consumers to believe that the store's prices were high. There probably



EARLY WORK FOR CAMERAMAN

One of the first pictures taken at the convention was that of Newman Willis, Emmart Packing Co., Louisville, and George W. Cook, president of the company.

was some justification for that attitude at one time, but there are few successful stores today which do not look the part. Women have learned that the prices in an attractive, successful store actually tend to be lower than those in poorly kept stores.

Taking all available figures, we know that more than 80 per cent of all groceries are sold on a self-service basis. This big development in food merchandising has come about over a period of years, but the war and shortage of help gave it a big impetus. Today, 80 per cent of all chain stores are on a self-service basis and 79 per cent of the independents are 100 per cent self- or semi-self-service. Not only that, but the self-service stores do more business per store than the counter service type.

Self-Service Merchandising

Mrs. Tomorrow is being accustomed and conditioned to buying wrapped and packaged merchandise from open displays. Sooner or later she will buy more of the products we make solely on the basis of recognition and appearance, without benefit of personal selling in the store. We say here that the proportion of total meat sales which are on a self-service basis now is less than 5 per cent. It may be less than one per cent. There are no reliable figures, but we know the proportion is very low.

Nevertheless, we recognize that self-service selling of meats is practical. There are many pros and cons in the matter which we shall not go into here. If you want to know the outstanding reason for self-service meats, however, just go into a busy super market. When you get to the meat counter, you take a number and you stand and wait until the number is called—10, 15, 20 minutes or even longer. The meat counter is the bottle-neck when the store is busy. You wait, whether you are buying several items, or just a half pound of bacon.

This fact, added to Mrs. Tomorrow's natural inclination toward self-service food buying, makes it seem sure that there will be further developments in meat merchandising by the self-service method.

Perhaps I am getting ahead of my story, however. Let's follow Mrs. Tomorrow into the store and see what she looks for.

She takes her little go-cart and starts around the store. In the course of a year she will buy 600 lbs. of meat for her family of four, based on the present consumption. The estimated per capita sumption of meat for 1947 is 155 lbs. against the 1939–41 average of 138 lbs.

All Meat Is Sold

She will buy her share of all the meat that is produced. We never have thrown any meat away in this country. Someone always eats it. We are different from many other food industries which can vary the amount they produce according to the demand. We have no control in a given year over the total amount of meat produced.

However, the amount of money Mrs. Tomorrow pays for her 600 lbs. of meat depends upon our ingenuity in merchandising it. If we present our merchandise to her in a manner which meets her full approval, she may pay just a little more for the 600 lbs. of meat than she would otherwise.

The amount Mrs. Tomorrow is willing to pay not only governs our current prosperity and profits but it determines our volume for the future. Only through successful merchandising can we fulfill our obligation to the producer of livestock and get him to maintain and increase his current rate of production of cattle, hogs and sheep.

In this connection, I believe we should have a goal as to the amount of meat we are going to sell Mrs. Tomorrow. As you know, per capita consumption of meat has been tied closely to consumer purchasing power. When people have money, there is a big demand for meat. Livestock producers raise more hogs and cattle and the per capita consumption goes up. When money is not as plentiful, demand goes down and livestock production goes down.

Meat Consumption Goals

This trend is historical, but I refuse to believe that it is inevitable. It is my firm conviction that this industry can do a lot to increase the demand for meat regardless of economic cycles. Meat animals live on the products of the soil and the land is there in good times and bad. We hope that through industrial statesmanship we can level out our economic cycles. Our aim is to merchandise our products well enough so that we make some progress toward increased sales even when economic trends are against us.

It certainly would seem that the entire industry—producers, packers and retailers—can cooperate to induce Mrs. Tomorrow to spend a greater proportion of her income for meat. The additional amount of money we need to insure a steadily increasing rate of meat consumption is very small. If it

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FOR SPRAY AND VEIN PUMPING

"JUST HOOK IT UP TO YOUR AIR LINE"

Stainless steel Tank for 150 lb. working pressure, stainless steel funnel and strainer and pipe into tank. Pipe fittings, chrome plated, adjustable pressure regulator and safety valve; complete with vein forceps, spray needle and 2 vein needles, 12 ft. high pressure hose. Made in 26, 52, and 120 gal. sizes. Price on application.

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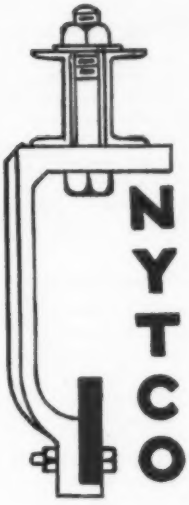

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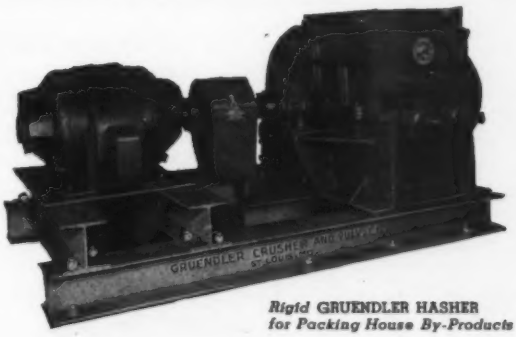

Rigid GRUENDLER HASHER
for Packing House By-Products

The "GRUENDLER" shown is the ideal type of crusher for grinding CRACKLINGS, EXPELLER or HYDRAULIC CAKE, TANKAGE. Other well known GRUENDLER Machines used in the Meat Packing Industry are . . . BONE CRUSHERS, GUT HASHERS and CARCASS GRINDERS. For uniform reduction and for greatest yield in dry or wet rendering, better select a GRUENDLER.

GRUENDLER

WRITE FOR ILLUSTRATED BULLETINS

CRUSHER and PULVERIZER CO. • ST. LOUIS 6, MISSOURI

could be measured it would only be a few pennies a week for each consumer.

Livestock men have found ways to raise more grain and hay per acre with fewer man hours of labor. They have also improved breeding and feeding practices. By thus lowering the cost of production the stockman certainly encourages more production.

Better Merchandising Needed

Our part, and the retailers's, concerns better merchandising and reduction in the *relative* cost of selling. Progress has been made in that connection, too, as evidenced by the fact that meat is now being processed, distributed and retailed at lower cost in terms of percentage than it was a few years ago.

For all of these reasons, I propose that our industry work toward a goal of 175 lbs. of meat per capita in 1955. I realize that many things can happen in the intervening years to change our picture. I still believe, however, that it is well within the realm of possibility to put 700 lbs. of meat in Mrs. Tomorrow's market basket for her family of four.

This is not a selfish objective. It is a legitimate goal nutritionwise since all recent findings in the field of nutrition emphasize the value of a higher protein diet.

Now, let's run through a list of things that Mrs. Tomorrow looks for in the store and then go back over them and see what we can do about them.

First of all we have cleanliness and freshness. Those are obvious musts in any food operation.

Then we have listed quality standards. The percentage of strictly fancy quality meat and meat products in our production is smaller than many people realize. Mrs. Tomorrow knows that. She buys meat often and is a good judge of quality. She doesn't insist on fancy quality all of the time but she does insist on getting the quality for which she pays.

Mrs. Tomorrow also looks for variety. A successful meat operation is a complete operation. The more variety a merchant can offer, the more trade he will attract. By variety, we not only mean a complete line of meat products, but we also mean a choice of grades in some cases and choice of brands in other cases.

Consumer Convenience

We have listed convenience here and we touched on that subject in our discussion of self-service meats. She also looks for convenience in the form in which she buys our meat. She may buy ham, for example, as smoked ham, bone-in cooked ham, boiled ham or canned ham. The cooked, boneless forms are more convenient for her to use and she weighs this convenience against the counterbalancing difference in price.

Here we have some factors which relate to package products. When Mrs. Tomorrow buys meat in a package—and she will buy more and more meat in a package as time goes on—she looks first for a reliable brand, a brand she has tried before, a brand she has read about or a brand someone has recommended to her.

Mrs. Tomorrow is concerned with the size of the package or cut. She wants to buy enough meat for a certain operation she plans in her kitchen. If the package is too large for her purpose, she won't buy it.

Her next concern is the kind of package—a carton, cellophane package, a square package, a round package, a flat package, a thick package. Why the kind and shape of the package should influence Mrs. Tomorrow is a mystery but we know that it does.

We also should mention the fact that Mrs. Tomorrow is influenced by the information she finds on packaged meats. She should be told exactly what the package contains, how to use it and the number of people the contents will serve. Don't neglect this factor in the belief that everyone knows what the product is, how to cook it and how far it will go. Two per cent of your customers are new customers every year because a certain number become of age and start buying for the first time. Other customers forget and want to be reminded of the facts about your products.

Mrs. Tomorrow looks for old favorites in the meat department and she will be disappointed and displeased if she

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ADVANTAGES

INCREASED SALES	•	by identification of product
CONSUMER DEMAND	•	by labeling with Heat Sealed Bands
DISTINCTION	•	by uniform individual Bands
LABOR SAVING	•	by banding 3,600 per hour
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NO CAPITAL OUTLAY	•	by distribution on a rental basis

SPECIFICATIONS

PRODUCTION	•	3,600 per hour
OPERATORS	•	one to feed machine
CAPACITY	•	16 to 32 mm. diameter—3¼" to 7" long
FEATURES	•	bands singly or one of two joined links
BANDS	•	thermoplastic type for heat sealing
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Our Chili Powders and Peppers are used extensively by A.M.I. and N.I.M.P.A. Members. Formulas, samples and full particulars promptly furnished on request. *Write today!*

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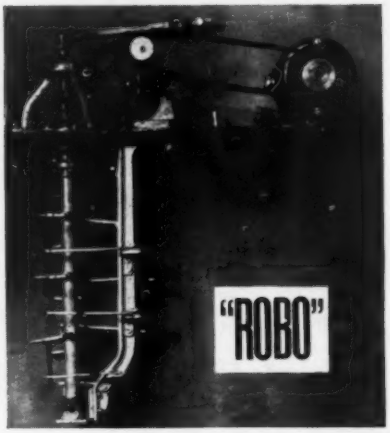

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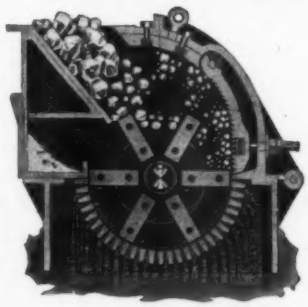

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Another VOLUME Item in the NEW HIGH STANDARD

CORNED BEEF HASH

Cash in on the growing demand for quality in today's and tomorrow's buyers' market. Feature Leeds new high standard Corned Beef Hash and Leeds line of superior quality prepared meats.

PERK FOODS COMPANY
500 N. DEARBORN ST., CHICAGO 10, ILL.
An Affiliate of READY FOODS CANNING CORP
Packers of Leeds Famous Canned Meats

It Takes More Than Meat to Make a Packinghouse Go

1. Posing for the NP camera are, left to right: P. D. Bartholomew, Griffith Laboratories, Inc., Chicago; T. R. King, engineer, Jackson Packing Co., Jackson, Miss.; J. M. Gentry, manager, R. L. Zeigler, Selma, Ala.; W. Melvin Haas, vice president, Haas-Davis Packing Co., Mobile, Ala.; J. W. Boman, treasurer, Jackson Packing Co., and George M. Haas, president, Haas-Davis Packing Co.

2. Left to right: W. M. Burrows, J. C. Wood & Co., Chicago brokers; M. B. Rafelson, president, Rafmex S. A., Mexico, D. F.; and Robert Burrows, Fred S. Burrows, and W. F. Richmond, all of J. C. Wood & Co.

3. Walter E. Fitzgibbon, Kroger Co., Cincinnati, O.; N. E. Farris, Farris & Co., Jacksonville, Fla.; Lou Menges, Lou Menges Organization, Inc., Basking Ridge, N. J.; Sam Farris, Farris & Co., and Chick Settlage, Haeseler Construction Co., St. Louis, Mo.

4. Tom Waller, F. C. Gribbon and K. D. Kubaugh of the Allbright-Nell Co., Chicago.

5. George Cokinis and Tom J. Barton, Reliable Packing Co., Chicago; H. J. Turner, Griffith Laboratories, Inc.; and Eugene Daley, Reliable Packing Co.

6. A family group left to right are Frank Morton, Mrs. Sol Morton, Sol Morton, president of Meat Industry Suppliers, Inc., Chicago, and Steve Morton.

7. Boston and Cleveland get together in this picture. Left to right: Frank Brodecki, First National Stores; Chet Filip, and Andy Brodecki, Packers Laboratory, all of Boston, with Harvey Fleischer, vice president, and Al Byk, president, Packer Products Co., Cleveland, O.

8. J. W. Worzniak, manager, Kowalski Sausage Co., Inc., Hamtramck, Mich., and Mrs. Worzniak; and R. C. Banfield, president, Banfield Bros Packing Co., Tulsa.

9. Seated are F. I. Ryan, manager casings department, and H. W. Clubb, manager of the specialty division, both of The Cudahy Packing Co., backed up by others from the casings dapartment (standing): G. H. Krohn, A. R. White, W. C. Mahoney, and S. J. Warren.

10. Entertainment! Jeanne Hurd and Lucille Roscoe, the Biltmore Girls, playing the violin and the accordion for the benefit of George E. Stutz (left), Western manager, and H. W. Townsend, sales manager, Sayer & Co., Inc.

11. Left to right: Charles Isecovitz, New York broker of packinghouse products; Sidney Lang, Columbia Packing Co., Boston, Mass.; Irving Snider, Snider Dressed Beef Co., Worcester, Mass.; B. S. Stearn, City Packing Co., and C. E. Dorman, broker, both of Boston.

12. Enjoying the hospitality of H. J. Mayer & Sons Co., were: front row, left to right: William Sammons, jr., and William Sammons, sr., Drummond Meat Co., Chillicothe, O.; E. Denham, Geo. A. Hormel & Co., Austin, Minn., and Ed Auge, owner, Ed Auge Packing Co., San Antonio, Tex. Back row: Ernest Straub, Drummond Meat Co.; A. J. Weiks, Chambers Packing Co., Olympia, Wash.; V. S. Shaffer and P. Shaffer, Midland Empire Packing Co., Inc., Billings, Mont.; C. W. Flechtner, Flechtner Bros. Packing Co., Fostoria, O.; C. Landgren, and O. G. Myhrman, Elliott Packing Co., Duluth, Minn., and Julius Maurer, St. Paul Sausage Co., St. Paul, Minn.

13. Mrs. Mulvey, and Mr. Petersen, New York City; with George Jorgenson, superintendent, Agar Packing and Provision Corp., Chicago, and Mrs. Jorgenson.

14. Shown in the Cincinnati Butchers' Supply Co. hospitality room are seated, left to right: Mrs. Zix, Gustav A. Juengling, jr., president, Gus Juengling & Son, Inc., Cincinnati, and Mrs. Juengling. Standing: Herman C. and William C. Schmidt, Fred W. Stothfang, and C. Oscar Schmidt, all of the Boss Company.

15. Part of the P. Brennan Co., Chicago, representation photographed in front of the elevators were left to right, front: D. G. Brown, cutting foreman; and W. Windmueller, canning superintendent. Rear: J. E. Schmidt, superintendent; J. Bugner, foreman; and E. Schaller, canned meats foreman.

doesn't find them there. At the same time, she is venturesome and she will try something new. It is good merchandising, therefore, to keep putting new products on the market from time to time. But watch out. She will try your new product once, but if the family votes no that is the end of it.

Finally, we have the influencing factor of prices. Mrs. Tomorrow may not know it, but she controls the prices she pays in the store. Everything in the store must be sold and most of our products must be sold within a short period of time. The prices, therefore, must be at a level which will guarantee that Mrs. Tomorrow buys all of the available supply, which of course, we cannot control.

I don't believe that it is necessary to enlarge on that subject with this audience. We have covered it time and again in our Institute research work and literature. The consumer makes the prices but I doubt very much whether Mrs. Tomorrow realizes her commanding position on prices.

It may be, too, that *we* do not realize how much the price level is affected by these other factors shown on the chart —*cleanliness, freshness, quality standards, variety, packaging*, etc. Mrs. Tomorrow's willingness to pay a little more is influenced by each and every one of these elements she encounters.

In the last few months there has been a great deal of discussion of so-called high meat prices. Some of it has been very embarrassing to us. There was a disposition in some quarters to blame us for something we were powerless to do anything about. I submit to you, however, that our real problem on prices is not high prices. It is low prices. Further, one of the outstanding causes of embarrassingly high prices is low prices.

That seems paradoxical but here is

what I am getting at: Through the years this has been a surplus industry. Aside from a few periods of extreme shortages under wartime conditions we have always had certain kinds and cuts of meat to sell which had to be marketed at a loss. Almost every product we make has been in the surplus class at one time or another.

Even today you can go over your list and find many items which are far too low in price in relation to the most popular products. If Mrs. Tomorrow could be induced, through better merchandising, to pay just a little more for these low priced products, which are just as high in nutrition, it would relieve the pressure on the so-called high priced products, and thereby bring them down in line with average values.

From that standpoint, I think we can truthfully say that low prices cause high prices, and, of course, low prices discourage livestock production. Shoulder cuts of the hog, for example, constitute about 25 per cent of the meat yield of the hog. It has usually been far more difficult to get a fair price for these shoulder cuts than for the hams, the loins, and the bacon.

Quite recently the better grades and choicer cuts of beef have been higher in price than the normal relationship for medium grades and less expensive cuts of beef. There have been many times, however, when that was reversed, when the problem was to get the money out of the top grades and choice cuts of carcass meats.

When Suppliers and Packers Get Together

1. Left to right are C. V. Johnson, Tobin Packing Co., Inc., Baltimore, Md.; Joe Messing, Newman-Messing, Inc., Brooklyn, N. Y.; J. McKenzie, treasurer, John McKenzie Packing Co., Inc., Burlington, Vt.; W. G. Sommerville, sales manager, Tobin Packing Co., Albany, N. Y., and Jack Sabean, vice president, John E. Smith's Sons Co., Buffalo, N. Y.

2. Left to right, front row: Charles F. Mayer, president; Sebastian A. Mayer, secretary, and Frank A. Mayer, vice president, all of H. J. Mayer & Sons Co. In the second row: E. O. Endres, M. C. Dakin, Paul J. Heath, sr., and H. J. Addison, also of the Mayer organization, served in the company's hospitality room.

3. B. J. Roehm, W. E. Oliver (general manager), and P. A. Schuster, all of the Afral Corp., Chicago, stopped for a moment in the exhibit hall for this NP picture.

4. Representatives of the Girdler Corp. Votator division: S. N. Welch, eastern sales manager; John E. Slaughter, jr., vice president; J. P. Thurman, sales representative, and Lamar D. Roy, jr., central sales manager.

5. Sales engineers with the V. D. Anderson Co., Cleveland, O., in their hospitality room include, left to right: W. H. McCormac, Cleveland; J. E. Castino, New York City, and J. C. Lundmark, Cleveland.

6. Seated: Mrs. A. F. Jaumann, and Mrs. J. J. Carey. Standing: A. F. Jaumann, sales manager and J. J. Carey, of the Leland Chemical Co. at Chicago, Illinois.

7. F. E. Bechstein and Milton Goldberg, both of Premier Casing Co., Chicago.

8. E. T. Marum, vice president, Wm J. Stange Co., Chicago; John H. Boman, president, and T. R. King, engineer, Jackson Packing Co., Jackson, Miss., and George Foster, Wm. J. Stange Co., in the Stange hospitality room.

9. Florence Chambers, *Meat* magazine; N. J. Allbright, Allbright-Nell Co.; Lou Menges Organization, Inc., Basking Ridge, N. J.; C. H. Settlage, and J. G. Allbright, Allbright-Nell Co.

10. Sam Marks, president; Ronald H. Marks, vice-president, and H. K. Hirsch, sales manager, Enterprise Incorporated, Dallas, Tex., with Harry Mouret, owner, and Hugh Comeau, curing foreman, Mouret Packing Co., Opelousas, La.

11. E. H. Zamon, Armour and Company; R. H. Alexander, California Compact Food, Inc., R. E. Carlson, Armour and Company, and J. Benzies, sales, Basic Vegetable Products, Inc., Vacaville, Cal.

12. Daniels Manufacturing Co., Rhinelander, Wis., representatives included: C. W. Zuehlke, eastern representative, Philadelphia; Paul D. Heim, Cincinnati J. S. Daniels, president, and Lee A. Hayward, St. Louis.

13. Basic Food Materials, Inc., Cleveland, O., was represented by: H. C. Homer, Jack Lachmann, Chicago wholesaler; D. F. Houdeshell and Holen A. Grade.

What Packer Can Do

What can we do about it? I think that the most constructive thing we can do toward creating a fairer and more satisfactory level of prices is to merchandise every single item we sell to the best possible advantage. It is our responsibility to sell the products of livestock at prices that move production. We owe that to the livestock producers as well as to ourselves. If we can get Mrs. Tomorrow to like all meat better and help her to buy a wider variety of meat, we will do a lot toward stabilizing and equalizing meat prices.

Better merchandising is the best way to control surpluses.

Now we have come to the point where we ought to sum up and see what we can do in our own companies and as an industry to woo this lady's favor, to get her to like our products and keep buying them week after week. Remember that she is a smart girl. She lives in the best home, buys in the best stores and serves her family the best food of any woman in the world. I feel that we have an opportunity to make a friend of her.

There is a lot we can do, for example, to improve the condition of our product as she sees it in the stores. Until a few months ago everything in our line moved out just about as fast as we could produce it. There wasn't time for product to get stale or damaged before it reached the consumer. Now it is a little different and it is going to be more different. We should establish strict schedules so that every piece of meat we sell reaches Mrs. Tomorrow in prime, fresh condition so that it looks clean and bright. Our employes, including the thousands of new people who have come into our industry, must be taught that they are handling food and not just 50 or 100 lb. boxes of merchandise. The food we prepare for Mrs. Tomorrow must be treated with the same consideration and respect that we apply to the food we serve on our own tables.

Improved Quality Standards

There is also room for improvement in our industry on quality standards. It is not for me to tell any member represented here what his standards should be for the various brands and kinds of product he makes. That is up to him. But once a standard is established on a manufactured product, we should see to it that the standard is observed. There is a temptation at times to lower quality below the standard because of peculiar market conditions. The momentary profit derived thereby, however, is gained at the cost of the consumer's good will.

In a volume industry such as ours, there is a tendency to neglect certain products because they are not big tonnage items. Remember, however, that Mrs. Tomorrow is keenly interested in variety and convenience. Let's strive to make every product we produce just as attractive and widely distributed as possible, regardless of the tonnage involved. I am thinking, among other things, of the variety meats. It was proved during the war that consumers like them. We had the advantage of a wide sampling of variety meats and we ought to follow up that advantage. Smoked meats, such as boneless butts, picnics and bacon squares, deserve a full share of our attention so that the lady with the shopping cart in the store will have a variety from which to choose.

That brings us to discussion of the major subject of new products and new packages. We know that there are going to be changes and we are determined to take the lead in making those changes and not wait until they are forced upon us. But, the fact that something can be done in the way of product changes or package changes is no reason that it should be done.

New Products

For example, two or three years ago you heard a lot about frozen, packaged meats for consumers. That was going to be the big postwar development of the industry—steaks, chops, roasts, all wrapped and frozen in the packing plants and offered to the consumer on a self-service basis. Where are they?

We know that the products can be prepared and that there is some economic justification for the plan in the recovery of some fats, bones, and trim-

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mings at the plant level where they can be put to the best possible use.

The plain truth is, however, that as of today it costs more than it is worth to make frozen consumer cuts in packing plants. A lot of equipment is necessary, not only to prepare and wrap the cuts but for shipment and handling. They not only have to be frozen but they must be kept frozen until they are sold to the consumer. Special packages are needed, too, and you also have the cost of storage. Another factor is the inventory problem. There are about 38 standard cuts of beef alone which could be so packaged. Multiply that by the number of grades and averages you would need and you run up against a burdensome, expensive inventory.

And for what? Freezing meat doesn't offer the consumer any advantages at present as it does in the case of poultry, fish and vegetables. As a matter of fact, a frozen roast is more difficult to cook properly than a fresh roast and it certainly doesn't taste any better.

Consumer Appraisal Keen

We'll repeat again that Mrs. Tomorrow is a smart woman. She is willing to pay a higher price for new products and packages which offer her a marked and desirable advantage such as convenience in the kitchen. But she weighs that advantage against the additional cost. The difference had better be in her favor or it's no sale.

Not to mislead anybody, I should add that our company is experimenting with packaged, frozen product of several kinds and has been for some time. No doubt most of the other members have too. Out of these experiments I fully expect some products to appear which will have a considerable distribution and consumer following. To date, however, we have not had any results which even approached the revolutionary forecasts of a few years ago.

My personal opinion, if it interests you, is that most of the packaged beef, pork, lamb and veal offered in self-service cases will continue to be prepared in the retail store for some years to come.

We have also been experimenting with consumer packages of unfrozen smoked meats, cooked meats and sausage. In this connection we have had some eye-opening revelations.

Not long ago, a supplier brought us a new package of radically different design. This package had everything. It was highly practical from a production standpoint and it gave good protection to the product. It was beautiful. It displayed the product well and it had the advantage of novelty. We thought sure we had a winner. So we made a test. We packed the product and put it into self-service cases in a few test stores.

Then a peculiar thing happened. Despite the enthusiasm of all the packinghouse experts, Mrs. Tomorrow didn't like our new package and didn't buy it. Side-by-side with the same product in the old package, the new package was outsold ten to one. The reasons why this happens are just as vague as the reason why Mrs. Tomorrow jumps up on a chair when she sees a mouse.

In the past, our industry has experienced some costly failures on new products and packages. But there is no reason why they should be costly. With well planned development and testing on a small scale, anyone can afford to try new products or packages.

Only after preliminary tests prove successful, however, is it advisable to make an investment in machinery and facilities for full scale production. Sales research is not a luxury. It is an inexpensive necessity available to any food supplier. It is my belief that we should be ready to try anything which promises better meat merchandising. But let's proceed gradually until we are certain of the consumer attitude.

Market Testing

Our responsibility for pleasing Mrs. Tomorrow does not end with production of an acceptable product. She still has to be sold. And while the retail dealer assumes a large part of the job of selling her, the entire burden should not be placed on him.

Our sales departments should assume the obligation of seeing that our products in the store are available in proper assortment. They should be able to advise a dealer as to the proper amount to buy for best sales results and how often to buy.

The old-time practice of loading up a dealer with all that traffic will bear is wrong. It is a menace to our dealer relations and it often means that Mrs. Tomorrow will take home stale, unsatisfactory product. It also may contribute unnecessary peaks and valleys in the price structure.

Steady Volume Important

The ideal that our sales organizations should work for is a steady week-to-week movement of product in and out of the store at approximately the same rate that it is produced. If we work earnestly toward that goal, I am sure we shall find a greater degree of cooperation from the dealer. He will appreciate sound advice of professional calibre and try to help us with our problems of supply and demand. The net result will be a better approach to the consumer, more orderly movement of product and less violent fluctuations in market prices.

Every salesman and sales manager should be appraised on the basis of his regular week-to-week volume of a full line of products, and not on the spectacular single sale of one product. When tonnage on a salesman's territory shows a steady, slowly increasing

Caught By The Cameraman Alone, In Pairs and in Groups

1. This happy gentleman is A. E. Neidt, vice president and sales manager of the Steelcote Mfg. Co., St. Louis, Mo.

2. Left to right: M. A. Leser and M. Arnstein, president and vice president respectively of J. G. Leser Co., Milwaukee, Wis.; and C. V. Franklyn and Natalie O. Wilkinson, president and vice president of the Mound Tool Co., St. Louis, Mo.

3. A. W. Brickman, vice president, Illinois Meat Co., Chicago.

4. A father and son team at the meeting was R. A. Hawley, president, Meat Packers Equipment Co., Oakland, Cal., and Charles C. Hawley.

5. Paul Giacobbe, Pilgrim Casings Co., Boston, Mass.

6. D. W. Hangerer (left), assistant development engineer, International Salt Co., New York, and S. A. Nystrom, field engineer for the company.

7. Left to right: William Gebhardt, president, Advanced Engineering Corp., Milwaukee, Wis.; H. W. Wernecke, manager, advertising sales, *The National Provisioner*, and Bob Ballantyne, packinghouse consultant.

8. D. E. Sheffer (left), factory representative, and Claude L. Brown, assistant sales manager, Westinghouse Electric Corp., Ken-Rad Lamp Division, Owensboro, Ky.

9. C. C. Schmiege and Ernest Teska, both of the customers' service division, Continental Can Co., Chicago.

10. Left to right: Bert Fortney, president, Fortney Body Co., Cleveland, O.; E. A. Thiele, vice president, Kold-Hold Mfg. Co., Lansing, Mich.; and T. O. Lester, Chicago office manager, Kold-Hold Mfg. Co.

11. Ted Meninga, sales representative, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich.

12. Ida Green and J. Kovoloff, both of the Chicago office of the Adler Co., Cincinnati, O.

13. Left to right: A. B. Stickney, engineer, Armour and Company, Chicago; George E. Hinchliff, sales representative, Chicago office, and J. F. Stone, New York office, both of Johns-Mansville Sales Corp.

14. W. D. Donavan and Walter J. Best of Best & Donavan, Chicago.

15. Left to right: Jakob Gallus, owner, Portland Provision Co., Portland, Ore., and Pee Wee Hughes and Ed. Schoenfeld, both of the Wm. J. Stange Co., Chicago.

16. Joseph X. Gubbins, midwestern sales manager, Paterson Parchment Paper Co., Bristol, Pa. and Mrs. Gubbins.

17. George Opitz (left), purchasing department, The Cudahy Packing Co., Chicago, and Frank J. Bilek, chief engineer, The Globe Co., Chicago.

18. A. L. Leak (left), Central Ohio Paper Co., Columbus, O. and E. B. Hubbard, Zimmer Paper Products, Inc., Indianapolis, Ind.

19. V. E. Langner (left), engineer, Marhoefer division, The Kuhner Packing Co., Muncie, Ind., and D. Weismann, sales engineer, Drying Systems, Inc., Chicago.

20. John Damer (left), sales representative. Federal Steak Maker Co., Minneapolis, Minn., and J. P. Bowlin, The J. P. Bowlin Co., southwestern distributors for Federal Steak Makers, Fort Worth, Tex.

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volume of all products every week it means that he and the dealers he serves are doing the right kind of merchandising job with Mrs. Tomorrow and all her sisters in the community in which she lives.

That brings me to another point in wooing Mrs. Tomorrow, without which any discussion of our customer relations would be incomplete.

The largest industry in the United States, from the standpoint of the number of people employed, the value of its products, or by any other standard you want to use, is not steel, motors or meat packing. It is the manufacturing process carried on in the kitchens of 40,000,000 American homes. Three times a day, 21 times a week, Mrs. Tomorrow goes into her kitchen and uses our products as raw material to prepare a meal. It is a manufacturing process in the truest sense and it is a very difficult manufacturing process because it is carried on without the benefit of controlled conditions of time, temperature, quantity and quality. It is almost impossible to get a uniform product in the kitchen.

Final Product Counts

Practically all of our merchandise is submitted to this manufacturing process and the things we sell are not judged on the basis of their quality as raw material. They are judged by Mrs. Tomorrow and her family, rather, on the quality of the finished product after it has gone through her kitchen manufacturing process.

In this respect, we are different from the makers of many other consumer goods, including several foods. Bakery goods are an example. When Mrs. Tomorrow buys a loaf of bread or a cake, she takes it home, cuts it and eats it and the baker has complete control over whether or not the product is satisfactory. It is different with a piece of meat—fresh meat, smoked meat, cooked meat, sausage or any other of our products. Meat is the center of the menu. It not only must be cooked or otherwise prepared in a satisfactory manner, but the accompanying elements in the meat must be satisfactory, too, if we are to score 100 per cent in the estimation of Mrs. Tomorrow and her family.

As the use of branded, packaged meats increases, the home manufacturing process will become more important to us, because a failure in Mrs. Tomorrow's kitchen will reflect on the branded product she used.

Here is another angle. Did you ever compare the number of meat cuts and products you sell with the number used in the average home? There is obviously a wide discrepancy. Many sausage products, many variety meats, the bony cuts of pork and canned meats are not widely used. Vast sections of the consuming public do not appreciate the goodness of lamb and veal. Women go to the market and bid up the higher grades of beef while lower grades go begging just because the consumer does not know the proper kitchen manufacturing processes to use for this type of meat.

I say it is our job to help Mrs. Tomorrow get the most out of the meat she buys and to expand the number of kinds of meat she serves.

Stress Meat Education

We all should see that we do our share in cooperating with and supporting the meat education program of the Institute. In addition, each of us should do as much consumer service advertising as possible over our own names. How to cook it and how to serve it—copy which sells meat as such—should take precedence over plugging our individual brands. That not only will help the industry as a whole but I feel it will help the brand, too. Mrs. Tomorrow doesn't buy a label in the store; she buys a menu. She envisions a ham, for example, on a platter, garnished and ready for the table with the accompanying vegetables and salad. And she will think more highly of the label which helps her with her menu.

Let's make another point clear. You can do an excellent consumer service advertising job without national distribution. I have in mind one member particularly who has done an excellent consumer service job with local newspaper advertising and a home service local radio program. And anyone who doubts whether the advertising has paid off should just go into this packer's territory and see what a big following the company has in the stores.

As a matter of fact, when you find a packer with a really dominant position in a territory you usually find that he has been active in developing consumer service. He employs a full time or part time home economist. Advertising, recipe booklets, cooking schools and other devices are used to tell women how to prepare and serve meat. These services are greatly appreciated by the housewife.

Hopeful for Future

All things considered, I am very hopeful about our relations with Tomorrow's Customer. I may have reminded you of a few things today, but I doubt whether I have told you anything new. I think that this industry is fully awake to its responsibilities in meeting the opportunities of tomorrow. The men assembled in this room not only have their own futures at stake and the welfare of the proprietors and stockholders of their companies, but I believe we can say with all due modesty that we play an important role in the future of our nation.

Our products, of course, are needed to keep the American people in good health and able to meet the challenge of a disturbed world. Moreover, a large part of our national economy is founded

Suppliers Came Too, Singly and In Groups

1. Daniel Dohm jr., (left), president, and George Nelke, secretary-treasurer, both of Dohm & Nelke, Inc., St. Louis, Mo.

2. Easterners in attendance were C. W. Reynolds, *The National Provisioner*, New York office, and Daniel Koss, secretary-treasurer, Standard Casing Co., Inc., New York City.

3. Two of the representatives from Heekin Can Co., Cincinnati, O., were John H. Dettenwanger (left) and J. G. Cahill, general manager sales.

4. Left to right: Baldwin Smith, treasurer, John E. Smith's Sons Co., Buffalo, N. Y.; J. J. Frank, president, Hercules Fasteners, Inc., Elizabeth, N.J.; A. Byron Chase, vice president of John E. Smith's Sons Co., and Harold E. Smith, vice president and general manager of the Buffalo firm.

5. Wilbur H. Turner, sales representative for the Heekin Can Co., Cincinnati, attended his thirtieth consecutive AMI meeting.

6. Left to right: R. S. Waite, vice president; A. F. Zavodsky, president, and Frank Daniele, secretary, all of Aromix Corp., Chicago.

7. Left to right: Albert O. Steckman, vice president; Joseph J. Frank, president, and John F. Mottley, sales manager, Hercules Fasteners, Inc., Elizabeth, N. J.

8. Left to right: Carl F. Pieper, president, Oswald & Hess Co., Pittsburgh, Pa.; R. E. Nowe, sales manager, J. T. Taylor Brokerage Co., Pittsburgh; and Harry C. Homer, mideastern sales manager, Basic Food Materials, Inc., Cleveland, O.

9. Mr. & Mrs. Jack Shribman, Premier Casing Co., Chicago.

10. Frank Mayer (left), H. J. Mayer & Sons Co., Chicago, and G. A. Albrecht, Reimer Sausage Co., Oshkosh, Wis.

11. Left to right: T. V. Lorenz, D. J. Crawley and L. D. Crump of Niagara Blower Co., New York.

12. C. R. Skidd (left) and Robert Matthei, both of the Dry Ice division. Liquid Carbonic Corp., Chicago.

13. Phil Hantover, president, Phil Hantover, Inc., Kansas City, Mo., and T. J. Irey, treasurer of the firm.

14. Left to right: Charles Wax, Edward Wax Casing Co., Chicago; Russ Swickard, Geo. A. Hormel & Co., Austin, Minn; Edward Wax, president, Edward Wax Casing Co., and Dan R. Lewis, Dan R. Lewis, Chicago.

15. Left to right: George H. Rohling, sales representative, American Agricultural Chemical Co., gelatin division, Chicago; John F. Seng, president, Seng Terminal Warehouse Co., Chicago, and H. W. Wernecke, manager, advertising sales, *The National Provisioner*, Chicago.

16. W. S. Coleman (left), sausage superintendent, Geo. H. Meyer Sons, Richmond, Va., and Jack Braun, Sayer & Co., New York City.

17. George W. Smale, president, Smale Metal Products Co., Chicago.

18. Left to right: Mike Leis, Sarah T. Keelan and James H. Wells, all of Zipp Casings, Chicago.

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on livestock and meat. Most of the grain and all of the hay and pasture produced on every American farm can be marketed only through livestock. In terms of acreage by far the greatest proportion of all our agricultural land would be worthless if it were not possible to convert the harvest into livestock and then convert the livestock into meat and by-products.

Further, a progressive, growing livestock industry is the secret of continued fertility of our soil. Farms without livestock are farms which are doomed to deterioration and lower production. Farms with livestock can be expected to develop greater production per acre and take advantage of discoveries in scientific agriculture which lower the cost of production.

Trend Toward Better Stores

On the merchandising side of the picture, I believe that the trend toward better stores which are more efficiently managed will continue. In fact, we haven't seen anything yet as to the extent of the ingenuity our retail merchants will use to get Mrs. Tomorrow to buy our products in greater volume.

The more you think about it, the more reasonable it seems to look forward to a per capita consumption of 175 lbs. of meat by 1955. Already, the per capita use of our products is well over 200 lbs. in many communities.

A recent study by a government agency showed that when meat was plentiful, the people of San Francisco and Spokane would use 246 lbs. per person a year. These cities were the leaders of those investigated, but here in Chicago the total was almost as high—243 lbs. Cincinnati, Denver, Houston, Indianapolis, Jacksonville, Fla. and Seattle were all using more than 200 lbs. per capita according to this survey and New York city's figure was 199.6 lbs. per capita.

Not only can we hope to increase our production to 175 lbs. per capita but there has been a record number of births in this country in the last few years. There will be more Mrs. Tomorrows tomorrow, so to speak—more buyers in our stores, more families to feed, more opportunity for increasing our volume.

As you may now realize, I am an optimist regarding the meat packing business. I am well aware that we have a tremendous job before us in every aspect of our business—procurement, production and sales. We need to work for better cooperation and understanding with many groups affected by our business—producers, suppliers, labor, our dealers and of course the general public.

Nevertheless, when you look back ten years you find that we have made tremendous progress in all phases of our operations and in our public relations. Go back 30 years to the time when this Institute was first conceived and the favorable changes are still more pronounced. We have shown our ability to work together for the general advantage of all concerned.

Undoubtedly, there will be minor setbacks in our progress here and there but I can see no other over-all result than continued gains toward a better, more prosperous and more highly regarded industry.

CHAIRMAN HARDENBERGH: We have heard about tomorrow's customer, her wants and needs and it will be interesting to learn as much as we can about her buying power. In presenting the next speaker I feel again that there is no need for a long introduction. His studies, his addresses, have received wide publicity. In addition, there is some biographical material about him in the printed program and I think it will suffice to say he is outstanding in his field and I am told by men who have heard him that he also is outstanding as a speaker.

I am pleased to present Dr. Sumner H. Slichter, professor of economics at Harvard university. His subject is, "What's Ahead for Consumer Buying Power?"

A LARGE AUDIENCE HEARD ABOUT MEAT EDUCATION

SLICHTER ANALYZES LONG-TIME OUTLOOK FOR BUYING DEMAND

DR. SUMNER H. SLICHTER: At few times has the long-run outlook for consumer purchasing power been more favorable than at the present time. The substantial readjustments which must occur within the next two or three years in parts of the price structure and which may give the country a difficult time of nine months to a year and a half should not obscure the bright outlook for high purchasing power during most of the next decade.

DR. SLICHTER

Just what do I mean by high consumer purchasing power? The expression is used carelessly and a precise definition is needed. A proper definition should run in terms of the relation of supply to demand. I mean by high consumer purchasing power a strong tendency for any increase in the output of goods to be met by increases in demand so that an increase in production of consumer goods produces no drop in prices or so that any drop in prices which does occur is slow and not sufficiently rapid to induce either business men or consumers to postpone buying.

Determinants of Spending

Four principal conditions determine whether the demand for consumer goods tends to be large in relation to the supply of goods: 1) the rate at which the supply of money is increasing; 2) the tendency for consumers to acquire new wants and to develop new ways of living; 3) the tendency for business concerns to bring out new or improved goods which consumers are eager to own, and 4) the adequacy of the supply of investment opportunities in relation to the volume of investment-seeking funds, and particularly the effect of an increase in the rate of investment upon the disposition to save.

Let us analyze the probable effect of these four determinants of spending during the next few years.

The rate at which the supply of money is increasing. At the present time holdings of cash and bank deposits are very large in relation to the dollar volume of production. These holdings are three and a half times as large as in 1940 and the dollar volume of production is a little more than twice as large. As a matter of fact, the supply of money has been increasing faster than the dollar value of production since time immemorial. Between 1840 and 1940, for example, the supply of cash and bank deposits in the United States increased five times as

The *Right Insulation* correctly applied *Never Grows Old*

Select the Right Insulation: Any insulation will save *some* money—but only the right insulation, correctly applied, will save the *most* money for the longest period of time. Because of its many advantages, leading refrigerating engineers have long relied on J-M Rock Cork Insulation for refrigeration service.

Get Correct Application: No insulation is better than the man who installs it. That's why every J-M Insulation Application Unit employs only skilled mechanics . . . each one thoroughly trained in all phases of up-to-date application methods.

25 Years Young! J-M Rock Cork Insulation was used back in 1922 to insulate this cold storage room of the Flora Produce Company, Flora, Ind. Because the job was *engineered right* and *applied right*, it is still providing dependable insulation, still saving money by guarding against spoilage.

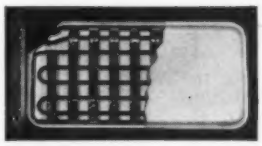
J-M engineers can plan the same efficient, long-lasting insulating job for *you*. For details write Johns-Manville, Box 290, New York 16, N. Y.

JM

Johns-Manville

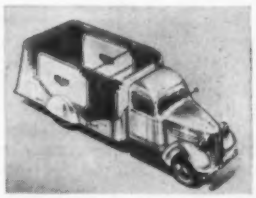
ROCK CORK

ON THE LONGEST HAULS with KOLD-HOLD TRUCK PLATES



By widening the margins of safety in meat transportation, KOLD-HOLD "hold-over" Truck Plates increase the radius of operation for packers, processors and distributors. Thus new sales territories are opened, and greater profits become possible with these lightweight streamlined evaporator plates.

The reasons for this added protection are very simple. KOLD-HOLD Truck Plate installations are scientifically calculated for each individual truck. The size of the body, the quality of its insulation, the probable number of door openings per trip—all these factors influence the determination of the correct number, size and position of KOLD-HOLD Plates. The plates themselves accept heat with every square inch of their surfaces. There are no sharp corners where ice might form and destroy cooling contact.



Charging is accomplished by a simple connection to an ammonia or freon line, or if desired, by a built-in compressor unit. Either method permits safe overnight meat storage within the truck—an economy in loading and unloading.

Effective prevention of spoilage, loss of bloom and trimming materially offsets the initial cost of KOLD-HOLD Plates. As for operating cost . . . it is less than 10¢ per day.

KOLD-HOLD *Jobbers in Principal Cities*

protects every step of the way

KOLD-HOLD MANUFACTURING CO., 460 E. Hazel St., Lansing 4, Michigan

fast as the dollar value of production. I believe that cash and bank deposits will continue to increase far faster than production. The volume of commercial, industrial, agricultural and personal loans today is low relative to the size of the national income—only half as large relative to the national income as in 1920.

Commercial Credit Growing

The capital needs of the country, as I shall point out presently, are very large. The commercial banks are eager to increase their business and are likely to persuade business to finance a large part of its huge capital needs by commercial credit. Hence the next ten years will undoubtedly see commercial credit growing faster than the volume of physical production. This will not necessarily mean a rise in prices, though a rise in prices may occur, because there is a long-run tendency for people to spend money more slowly. Today, for example, money is being spent at only about one-fifth the rate of 1840. Nevertheless, the prospective large increase in the volume of commercial credit will mean that the level of prices will have a strong tendency to remain high. Every other war—the Napoleonic Wars, the Civil War, the First World War—has been followed by a downward drift of prices. I suspect that as far as the United States is concerned the story may be different this time.

The tendency for consumers to acquire new wants and new ways of living and the tendency for business concerns to bring out new and improved goods which consumers are eager to own. These two conditions determine how rapidly people spend their money. If they have a tendency to spend it too slowly, demand will not keep pace with increases in output and prices will drift downward. The history of the last hundred years is full of interesting and even startling contradictions. It has been a time when ways of living have been rapidly changing, when industry was offering the community a rapid succession of new goods. The railroad, electric light and power, the automobile, the airplane, epitomize the revolutionary changes that have occurred in goods and in ways of living during the last hundred years. With so many new kinds of goods being offered for sale and so many new wants being created among consumers, one might expect the rate at which money is spent to rise, or at least not to fall. Nevertheless, during the last hundred years the rate at which money is spent has fallen rapidly. As I pointed out a moment ago, it was being spent only one-fifth as fast in 1940 as in 1840.

The strength of consumer demand will depend in large measure upon how much business can halt the tendency for people to spend money more slowly. If business were able entirely to halt the drop in the rate of spending, there would probably be a dangerously rapid rise in prices because, as I have pointed out, cash and bank deposits will undoubtedly continue to increase faster than physical production can possibly increase.

THREE BIG MEN SHARE A CHUCKLE

Neither S. Edgar Danahy (left), chairman of the board of the Danahy Packing Co, Buffalo, N. Y., nor Edward N. Wentworth (right), director of the livestock bureau of Armour and Company, are small, but they, like almost everyone else, couldn't compete with the stature of R. C. Pollock, general manager of the National Live Stock and Meat Board, Chicago, Ill.

The adequacy of the supply of investment opportunities in relation to the volume of investment-seeking funds. When money is spent on building plants or machines, consumer incomes are created. A corresponding supply of consumer goods, however, is not immediately created. Unless the increase in incomes resulting from the investment spending produces a sufficient increase in saving, consumer goods will be scarce in relation to the demand for them. A strong demand for consumer goods is bound, therefore, to exist so long as the demand for investment-seeking funds tends to outrun the supply of investment-seeking funds. That condition is likely to exist in the United States, I think, during most of the next decade. There will be short periods of adjustment when investment spending drops substantially. During most of the next decade, however, the demand for investment-seeking funds is likely to exceed the supply. What is the basis for this belief? There are four principal reasons for it: 1) the huge accumulated capital needs of the country; 2) the rapidly expanding expenditures on industrial research; 3) the huge accumulated needs of consumers, and 4) the long-time tendency for the rate of saving to decline.

The huge accumulated needs of industry. These are the result of the long depression of the thirties and of the war. During the 60 years from 1880 to 1940, capital per worker increased at the rate of about two per cent a year, which meant that it doubled in about 40 years. During several years in the thirties and several years during the war, capital was not replaced as rapidly as it was wearing out. There has also been an increase of about 12,000,000 in the volume of employment since 1940. This is about twice as large as the entire work force of Canada. As a result, there is less capital per worker in industry today than in 1940. In fact, to restore capital per worker to the 1940 level would require an investment of about $43,000,000,000. To raise capital per worker to the amount required by the normal rate of growth would require about $75,000,000,000 of capital. I think that the true shortage of capital is closer to $75,000,000,000 than to $43,000,000,000.

This shortage is not as clearly apparent as it might be because the country has more machines in operation today than in 1940 but the total unused life of all machines today is less than the total in 1940. The shortage of capital, however, does frequently manifest itself—one automobile plant after another shut down for lack of steel; crops threatened with destruction because of lack of railroad cars; newspapers compelled to limit circulation for lack of paper; building construction slow, uncertain and costly for lack of materials; travel difficult and uncomfortable for lack of hotel rooms and modern railroad cars.

More Spent for Research

The rapidly increasing expenditures on industrial research. Added to the investment opportunities represented by the huge accumulated needs of industry are the opportunities created by the rapid growth of industrial research. Expenditures on industrial research were nine times as large in 1940 as in 1920 and they are twice as large today as they were in 1940. Industrial research would be conducted on an even greater scale today if technical personnel were available. Ever since 1870 the number of chemists, physicists and engineers has been growing from ten to 14 times as fast as the gainfully employed. The rapid growth of technical personnel is bound to continue. Research is contagious. If one enterprise does it, others must do it also or be left behind.

The huge accumulated needs of consumers. Consumers as well as industry have huge accumulated needs which will take some years to satisfy. Today there are 3,000,000 more families in the United States than at the time of Pearl Harbor, but fewer automobiles. Real per capita income is about one-sixth larger than in 1941, so families are better able to afford cars. Many of the new families have had little opportunity to purchase household goods. Even in building up stocks of non-durable goods,

(Continued on page 210.)

Exhibits

EXTENSIVE and unusually concrete displays of equipment and materials (many of them "working"), together with a plentiful supply of colorful posters and descriptive materials, highlighted the exhibit of packinghouse equipment and supplies. This year's exhibit was the first since the annual feature was halted by the war. More than 65 firms employed approximately 90 large exhibit booths to give packers an opportunity to examine and hear about the latest developments in equipment and supplies.

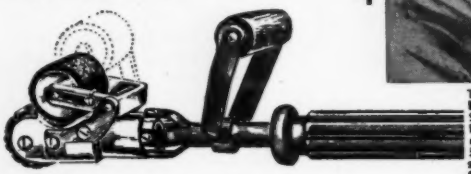
Almost every type of equipment and material used by the industry was featured at the various booths. Killing, processing and sausage making equipment, packaging machinery and materials, office necessities, seasonings and binders, lamps, safety shoes and clothing for workers and other important items all attracted their share of interested packers and processors. Representatives of suppliers were on hand to explain the advantages of their products and to answer questions.

The exhibit hall was spacious, well-arranged and exhibitors' and packers' interests were overseen by a competent staff. A complete and authentic directory of exhibitors and booths was maintained by *The National Provisioner* on an attractive board located just inside the gate to the display room.

It's GREAT LAKES *for positive identification*

NO. 200 BEEF BRANDER

This equipment provides a quick positive way of attractively marking beef with grade marks, trade marks or brand identification. Non-electric, requires no heat, does a perfect job. Sturdy construction, interchangeable, hand engraved roller dies.

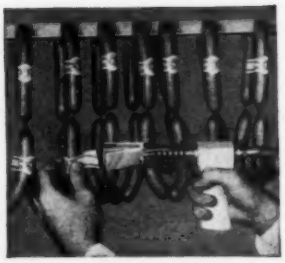


The No. 200 Carcass Brander costs only $47.50 with one roller die; extra roller dies (any design) $27.00 each. Extension handle $2.00. Order now!

NO. 152 SAUSAGE ROLL BRANDER

(See left) This is the proper equipment for marking bologna, braunschweiger, liver sausage and all other large sausage products. Gives sausage added sales appeal and permanent trademarked protection against substitution. Electrically heated engraved brass roller die; no smearing. Costs only $50.00 complete with die; extra dies $30.00 each. Order!

GUN TYPE BAND SEALER



For banding sausage this gun type sealer is ideal equipment. Seals bands on sausage neatly, tightly, with a flick of the finger, without removing sausage from stick or cage. This sturdily constructed, handy sealer costs only $17.50, ready to plug in and use.

GREAT LAKES *Meat Branding* **INKS**

For best results from all branders, use Great Lakes Inks. Regular and quick-dry types, violet and brown colors. Highest quality at cost cutting prices!

GREAT LAKES STAMP & MFG. CO.

2500 IRVING PARK ROAD • CHICAGO 18, ILLINOIS

EXHIBITORS—1

1. ENTERPRISE INCORPORATED, Dallas, Tex. Making its first public showing, the EBSCO carcass splitting saw received an enthusiastic response from many packers who stopped at the Enterprise booth. In photo (left to right): Leon Rednor, owner, Evangeline Packing Co., Lafayette, La., C. E. Anderson, vice president, H. P. Cannon & Son Co., Bridgeville, Del., and EBSCO representatives H. K. Hirsch, vice president and sales manager, Ray Didier and Don Kemp, sales.

2. CINCINNATI BUTCHERS' SUPPLY CO., Cincinnati. Visitors at the firm's exhibit were greeted by a hearty invitation to visit the Boss hospitality headquarters on the twelfth floor of the Palmer House. Standing in front of the picture panel of the Boss plant and equipment are: William C. Schmidt, vice president, Herman Schmidt, chairman of the board of directors, and C. Oscar Schmidt, president.

3. THE JOHN J. DUPPS CO., Cincinnati. Genial hospitality was the main feature of the attractive booth maintained by The John J. Dupps Co. on the exhibit floor. Shown in the photo are R. L. McTavish, vice president, and F. J. Norris, treasurer.

4. SPECIALTY MANUFACTURERS SALES CO., Chicago. The large line of C-D grinder knives, plates and cutterknives for the meat packing industry were on display. In picture are Virnell Disch, C. W. Hess, manager, and Harold Mitchell. Also on hand to greet his many friends in the industry was "The Old Timer," C. W. Dieckmann.

5. PURE CARBONIC, INC., Chicago. Two of the firm's dry ice bunkers for refrigerated motor trucks and railroad cars were on display in the booth. Present to discuss the firm's product were D. C. Johnson and Earl Tomberlin, Pure Carbonic salesmen.

6. LINK-BELT COMPANY, Chicago. Photostatic blowups of advertisements featuring Link-Belt handling equipment for meat packing plants formed the background for the firm's booth. Equipment on display included an electrofluid drive and a Link-Belt overhead trolley. Link-Belt personnel shown in the photo are (left to right): Edward J. Coyle, E. M. Schmidt, J. O. Durant, sales engineer, G. A. Helbing, and C. H. Hever. All are assigned to the packinghouse sales division.

7. MARATHON CORP., Menasha, Wis. The popularity of the Kartridge-Pak automatic branding, banding and "packaging" machine was evidenced by the crowds who stopped to watch the machine being put through its paces by three women operators. Marathon salesmen shown in the photo are W. E. Adcock, W. E. Snyder, Morris Porter, and James McNevins.

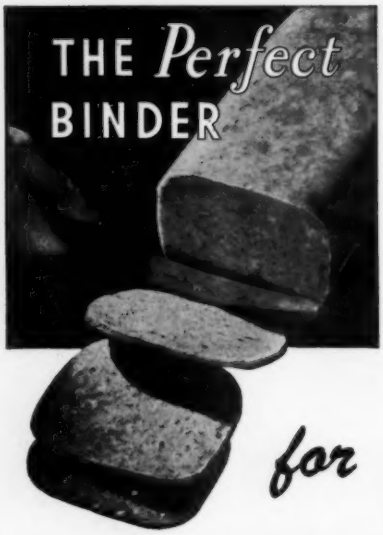
8. PRESERVALINE MANUFACTURING CO., Brooklyn. The famous Presco trademark was prominently displayed in the comfortable booth made available to the many foot-weary conventioneers. On hand to greet new and old customers and to expound the merits of Presco seasonings for sausage and meat specialties were Bob Kenyon and Ben Miller.

the ERSCO CARCASS SPLITTING SAW
468-10
HOSPITALITY HEADQUARTERS
Suite 1949W

THE JOHN J. DUPPS CO
Hospitality Rooms
1150 - 1151 - 1152

HOG MORE PROFIT,
by using -
C D
PLATES

MARATHON PACKAGING



for

WIENERS, BOLOGNA

Specialty Loaves

M-M-M FLAVOR

Soy does not, in itself, flavor the meat. The improved taste results from the blending of fat and lean, and from the retention of moisture and freshness. Special X soy is a superior binder.

HOW TO USE IT

Soy flour or Grits is used in the same manner as any other binder. Some say they like Special X and Meatone Grits in combination with cereal or milk. Many prefer straight soy binder. We suggest you try them both ways.

Write for FREE Samples

EXHIBITORS—2

1. GREAT LAKES STAMP & MFG. CO., Chicago. One of the most popular booths at the convention, the Great Lakes' exhibit featured the firm's complete line of branders, heat sealers, carton and casing printers and branding inks. Shown in photo are Great Lakes' chieftains J. H. McPheron, secretary, and J. H. Payton, president, who discuss branding problems with Ray Ailes, curing and smoked meats foreman, American Stores, Lincoln Pack Division, Lincoln, Neb.

2. TRAVER CORP., Chicago. Colorful, attractively printed foil and cellophane wraps for hams, bacon and other meat specialties captured the eyes of conventioneers. Also on display were the firm's new Tralon plastic bags for frozen poultry and cellophane bag wraps for frankfurts. In photo: Michael J. McEnery, jr., Philadelphia sales representative, and Clinton D. Ackerman, Cleveland sales.

3. THOMSON & TAYLOR DIV., THE WARFIELD CO., Chicago. On hand to greet the firm's many customers and friends attending the convention were A. P. Voaden, manager, spice division, and Nick Blasius, who had plenty to say about the merits of T & T spices, pepper, nutmeg and mace.

4. THE FEDERAL ENGINEERING CO., INC., Minneapolis. Shown for the first time at an AMI convention, the Federal Steakmaker was accorded a good reception by those who watched it in operation. Demonstrating the two models shown were Roy Simmons, Chicago sales, and John Damer, who represented the Minneapolis office.

5. WHITMIRE RESEARCH LABORATORIES, St. Louis. Packers who visited this exhibit were politely asked if they wanted to kill a roach. It was the Whitmire way of proving the positive killing power of the firm's product, "Water Bug'er," a non-toxic water spray concentrate for the control of roaches and other insects. In attendance to answer questions were W. A. Pohlman, Chicago representative, and Frank X. Kern, Whitmire sales manager.

6. ALLEN TOOL & GAUGE CO., FAMCO DIV., Pittsburgh. The main feature was the "Famco" Sausage Linker for linking frankfurts or wieners in natural casings. Operated throughout the convention, the Famco Linker links 1,400 pounds of sausage or makes 12,480 5" links per hour. Present to demonstrate the machine was S. A. Granche, sales, and R. C. Allen, manager, Allen Tool and Gauge Co.

7. HYDRO-TEX CORP., Chicago. In addition to samples of its complete line of clear, white and black all-plastic industrial aprons, the exhibit display included a number of plastic sleeve protectors, shower curtains and household aprons. Present to meet packer friends were Robert Long, sales, and L. V. Kay, sales manager.

8. BUILDICE CO., INC., Chicago. The Buildice exhibit booth proved to be one of the coolest spots at the convention for those who stopped to discuss the Buildice brine spray air unit for pork and beef coolers. In photo (left to right): J. A. Heinzelman, president, R. B. Crawford, sales manager, Robert Moulenbelt, Terre Haute branch manager, R. A. Espe, sales engineer, and J. S. Lewen, Chicago sales.

Purchasing Power Analyzed

(Continued from page 206.)

only moderate progress has been made. Important to remember in analyzing markets is that income per family has increased more than real income per person because there are more persons working per family than before the war. Since Pearl Harbor the number of families has increased by 3,000,000,000 but the number of people at work has increased by about 6,000,000,000. The rise in income per family is important in considering the demand for housing. The number of families which have incomes of $2,000 a year today is nearly three times as large as the number who had incomes of that amount expressed in present dollars in 1935. The quantity and quality of American housing has not yet adjusted itself to the recent rise in real income per family. Some years will be required for this adjustment.

The long-run tendency for the rate of saving to decline. For many years the American people have been becoming less thrifty. A century ago a larger proportion of incomes seems to have been saved than today. During the last 60 years the decline in thrift has manifested itself, not in a drop in the proportion of incomes saved, but rather in failure of the proportion of incomes saved to rise as the average per capita income increased. For most Americans the decline in thrift has made no difference because they did not save anyway. It has always been true that most of the saving has been done by a small fraction of the population. During late years in particular the small part of the population which does the saving has been hit by tax increases.

Tendency Against Thrift

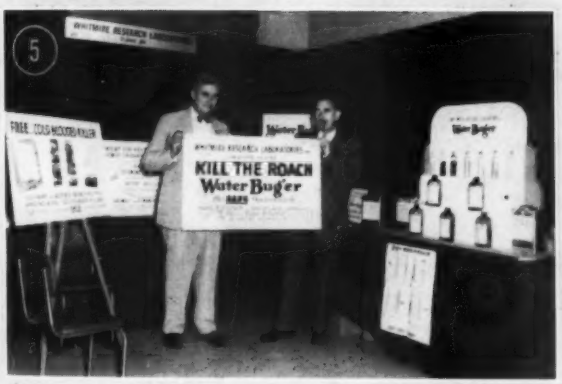
The decline in thrift may be expected to continue. Indeed the disposition of individuals to save may be lower than ever during the next few years. The personal loan business is still relatively undeveloped and it can be made much easier and much more attractive for individuals to go into debt. Undoubtedly it will be. Indeed, unless controls are established, one should not be surprised to see the volume of consumer credit more than double or treble within the next five years. This may not be good for the country in the long run and will eventually cause trouble. In the meantime, however, it will help produce a strong consumer demand for goods.

The tendency for thriftiness to decline will mean that increases in investment opportunities will not be met by corresponding increases in the volume of individual savings. To some extent the deficit will be made up by increases in corporate savings. In large measure, however, the demand for investment-seeking funds will be met, as it has been in the past, by the expansion of credit. This, of course, means that there will be

TRAVER CORPORATION

Beef Sausage Flavor
T&T
SPICES
Thompson & Taylor

HOMEMAKERS KNOW MIXED SHAPES
ACTUALLY MARK'S STEAKS


FREE ODOR-MOISTENER
KILL THE ROACH
Water Buger

FAMCO
SAUSAGE LINKING MACHINE
CAPACITY

EXHIBITORS—3

1. ALUMINUM COOKING UTENSIL CO., New Kengsington, Pa. An attractive display of aluminum meat pans, spice pans, trucks and chairs was highlighted in the exhibit of the firm's line of Wear-Ever aluminum supplies for the meat packing industry. In the picture are R. C. Deardorff, assistant sales manager, industrial division, and C. D. Greeno, industrial sales, Chicago.

2. THE GLOBE COMPANY, Chicago. The Globe-Fee lard filling machine, tracking, conveyor hangers and trolleys with stainless steel hooks and meat trucks comprised the Globe exhibit. Packers were invited to register for Globe's new general catalog. Shown at the booth are Globe executives, R. L. Gambill, executive vice president, and C. E. Gambill, president.

3. KEN-RAD LAMP DIVISION, WESTINGHOUSE ELECTRIC CORP., Owensboro, Ky. An eye appealing display of industrial lamps in varied colors, types and sizes was the center of the Ken-Rad Lamp exhibit. Various phases of proper industrial lighting were explained by two of the firm's staff shown in the booth: Claude L. Brown, assistant sales manager, and D. E. Sheffer, factory representative.

4. B. H. BUNN CO., Chicago. On hand to demonstrate to interested packers the mechanical tying efficiency of two Bunn tying machines in handling different packinghouse packages was H. E. Bunn, vice president.

5. DOHM & NELKE, INC., St. Louis. The Rind-Master and its companion, the bacon press, were the two items of packinghouse equipment which attracted considerable attention from meat packers. The advantages of their machines were explained by Daniel Dohm, jr., president, and George H. Nelke, secretary-treasurer.

6. SPERTI, INC., Cincinnati. Colored and illuminated photographs showing applications of germicidal lamps in the ageing of beef and quality protection throughout the meat plant were the principle items of interest shown. Roy J. Tate, sales engineer, and J. R. Lostro, engineer, were ready to answer any technical questions on packinghouse application of germicidal lamps.

7. BASIC VEGETABLE PRODUCTS CO., Vacaville, Cal. A complete line of the firm's dehydrated onion, garlic and celery products was featured in the display. Pictured are O. Benzies, Chicago, sales, and C. P. McLaughlin, Ohio representative.

8. E. G. JAMES CO., Chicago. Over 50 items of packinghouse equipment were on display in this interesting exhibit which made use of a continuous slide to show the complete line to conventioneers. Warren G. Henry, sales manager, machinery division, is shown in the booth.

Why Call for Cudahy's NATURAL Casings?

That's not a "$64.00 question" since practically everybody knows Cudahy's Natural Casings get the call because they are *selected, cleaned, graded,* and *packed* in *modern, government-inspected plants* by people who *understand their business.*

We have a variety of casings for every need and our nationwide producing and distributing facilities are equipped to supply you competently and swiftly.

Write, phone, or wire:

THE CUDAHY PACKING CO.

General Offices: Chicago

Producers and distributors of Beef and Hog Casings
Producers and importers of Sheep Casings.

MORE BY SLICHTER

a strong tendency for the demand for goods to outrun the supply.

Up to this point I have ignored the probable effect upon consumer demand of the cash budget of the government. If the government collects more cash than it disburses, it tends (subject to certain qualifications) to diminish the demand for goods. If the government disburses more cash than it collects, it tends (again subject to certain qualifications) to increase the demand for goods.

National Debt Increasing

No one really knows whether the government's budget on a cash basis will usually show a surplus or a deficit. My guess is that it will usually show a deficit. The reason for this conclusion is my belief that the American people will not tolerate high enough taxes to prevent a deficit. During the last 150 years the federal budget showed a deficit in more than 60. That was in the main a period when federal expenditures were low relative to the national income and when government revenues were almost entirely raised by low indirect taxes.

Now that taxes are high and in large measure direct, the pressure for reduction will be very strong regardless of the condition of the budget. Even during the last year, when demand for goods has been substantially above the capacity of industry and when a budget surplus was badly needed to reduce the upward pressure in prices, Congress almost succeeded in reducing taxes. However mistaken one may regard the judgment of Congress, one must concede that it represented the desire of the great majority of the people. All of this

1
WEAR-EVER
ALUMINUM

2

3

4

5

6
Increase

7
BASIC
ONION and GARLIC
FLAVOR
QUALITY
COST

8
Alumi-Jug

record points to the conclusion, it seems to me, that consumer demand will be sustained by frequent or even chronic deficits and that the national debt will gradually grow.

Suppose, however, that the people of the country prove more willing to pay stiff taxes than the record seems to indicate and that they insist on reductions in the national debt. Will the reduction be dangerously deflationary? Will it substantially limit consumer demand and weaken prices? Not necessarily. It is dangerous to assume, as do many economists, that a budget surplus is necessarily deflationary. If a budget surplus arouses the expectation of tax reductions, it is likely to be stimulating rather than depressing to business. Much depends also upon the part of the debt which is being paid off. If a deflationary effect is desired in order to offset strong inflationary tendencies, this can be achieved by redeeming that part of the debt held by the federal reserve banks or by the commercial banks. If the debt is reduced by paying off individuals who are redeeming war savings bonds in order to buy houses, automobiles and other goods, there is no net inflationary or deflationary effect.

Let me conclude these remarks by reminding you of the great problems which confront the American economy. Three seem to me to stand out above all others: 1) the problem of developing

EXHIBITORS—4

1. CINCINNATI COTTON PRODUCTS CO., Cincinnati, O. A large assortment of "Form-Best" stockinettes and shroud cloths, against a pictorial background depicting the firm's growth and various operations conducted in the manufacture of these items, featured this year's exhibit. Shown in the photo (left to right): Harry Freedman, Dave Rose, Louis Goldfarb and Sydney X. Goldfarb.

2. CENTRAL WAXED PAPER CO., Chicago. Featuring the many attractive Mullinix bacon, pork sausage and butter packages, for which the firm is a licensee, the Central Waxed Paper booth was a stopping place for merchandising-minded packers. On hand to greet visitors were C. D. Mullinix, Mullinix Packaging Division, Crown Zellerbach Corp., Los Angeles, Calif., and J. W. Haley and Margaret Wezeman of Central Waxed Paper Co.

3. EXACT WEIGHT SCALE CO.: Chicago. A few of the items in the complete line of weight-checking scales the firm manufactures for the meat packing industry were on display in the booth. John H. Downer and William F. Payton, Exact Weight Scale salesman, are shown.

4. ADVANCE OVEN CO., St. Louis. The biggest attraction on exhibit was the 192-loaf, stainless steel oven displayed by this St. Louis firm. Small by comparison was a browning tank for finishing meat loaves. In photo are Henry Rottersman, president, and C. K. Dorsey, Advance vice president.

5. REYNOLDS ELECTRIC CO., Chicago. A miniature working model of a cold storage room equipped with Reco refrigerator fans was used to demonstrate the advantages gained through use of this equipment. Other Reco products included a fly-chaser fan, combination air circulator fan equipped with germicidal lamps and various air circulators. Shown in the photo are John Tregay, engineer, and Clyde Tompkins, advertising manager.

6. BASIC FOOD MATERIALS, INC., Cleveland. A colorful painted background of ripe pumpkins and shocked corn served as a timely reminder to packers and sausage manufacturers of the approaching pork sausage season. Shown in the photo (left to right): Steve Francis, sausage superintendent, M. F. A. Packing Co., Springfield, Mo., C. M. Cox and Ray F. Beerend, president, Basic Food Materials, Inc.

7. WEKSLER THERMOMETER CORP., New York, N. Y. A representative display of the many Weksler instruments used to indicate and record temperature, pressure and humidity was the feature attraction. In the photo is Frank J. Pla, Weksler sales manager.

8. BROWN INSTRUMENT CO., Philadelphia. Various temperature and humidity air-operated controllers used in meat processing plants, as well as pressure and temperature controllers, electric pyrometers and indicating controllers were on display in the booth. L. E. Slater, industrial engineer, and W. G. Scharing, sales engineer, are shown in the photo.

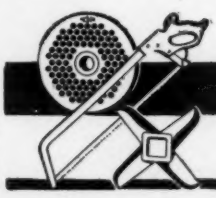
DESIGNED FOR PACKERS

PITTSBURGH-ERIE SAW AND GRINDER SERVICE

Pesco Pete can supply the perfect tools for the heavy cutting and heavy grinding of the meat packing industry. He is ready to supply you with the following efficient services, for a small monthly charge:

PESCO SAW SERVICE Large hand saw frames; beef splitter frames, pig nose and scribe frames, designed for heavy duty. Sharp filed blades, individually wrapped and inspected perfect—ready for quick blade changes.
PESCO BAND SAW BLADE SERVICE Machine-filed, inspected band saw blades to fit more than 40 types of meat and bone cutting machines. Pesco Pete will keep them repaired and supplied.
LARGE CHOPPER PLATE AND KNIFE SERVICE Made in sizes to suit your needs and ready for long and faithful service.

Pesco Pete will be pleased to give you complete details, or you may write direct.



PITTSBURGH-ERIE SAW CORPORATION

4017-31 LIBERTY AVENUE PITTSBURGH, PENNSYLVANIA
BRANCH PLANTS: ST. LOUIS and LOS ANGELES

FORM-REST
SOCKINETTES
CINCINNATI COTTON
FORM-REST
SHROUD CLOTHS
1

CENTRAL WAXED PAPER CO
mullinix
PACKAGES
2

3

4

REYNOLDS ELECTRIC COMPANY
5

When the frost is on the pumpkin
IT'S PORK SAUSAGE TIME
BASIC FOOD MATERIALS Inc
6

7

BROWN INSTRUMENT COMPANY
8

MORE BY SLICHTER

friendly relations between business and organized labor; 2) the problem of keeping production stable and avoiding the ups and downs of business, and 3) the problem of adjusting the international economic policies of the country to the changed conditions of the world.

I would be less than frank if I didn't couple with this rather optimistic view, some reminder that we have a long way to go before stability of our economy has been achieved. I think, in certain respects, conditions have changed decidedly in favor of stability. As I pointed out a moment ago, bank credits —private bank credits, that is, commercial, agricultural, personal loans—are much smaller relative to the national income today than they have been in times of the past. So long as they remain small, relative to the national income, fluctuations in their amounts have less tendency to set up private ups and downs in the economy as a whole. Perhaps we shall succeed in keeping commercial, industrial and personal loans low, but the commercial banks are going out vigorously after the business and I think they probably will succeed in expanding credit relative to national income and restore it as a factor of instability.

We are gaining slowly in stability because replacements are becoming a

Packaging sliced bacon with high-speed EXACT WEIGHT Scales—Canada Packers, Ltd. Toronto, Canada.

Sliced Bacon Packaging —one of the most efficient in America . . . .

Of the more than sixty major industries we serve none have more efficient packaging methods than the meat industry. No industry's products are more uniform . . . no production lines better planned . . . no check-weighing scales better fitted to the operation. In fact EXACT WEIGHT Scale Model #253, designed and built expressly for sliced bacon packaging, was suggested by meat packaging engineers and built to these specifications (1) dependability, (2) adaptability, (3) simple construction, (4) speed of operation, (5) long life, (6) fraction-ounce accuracy. Used today by the largest as well as the smallest packers in the industry these famous scales have proven their worth. Write for details.

INDUSTRIAL PRECISION

Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY

480 West Fifth Ave., Columbus 12, Ohio *Dept. F* 783 Yonge St., Toronto 5, Canada

EXHIBITORS—5

1. THE ALLBRIGHT-NELL COMPANY, Chicago. The firm featured a complete bacon slicing and wrapping line with stainless steel conveyors and tables built around the new high speed hydramatic bacon slicer. Shown explaining the working principles to interested packers is H. A. Scherer, advertising manager.

2. FEARN LABORATORIES, Franklin Park, Ill. Literature and information on the use of the firm's complete line of flavor builders, sausage binders and meat cures were graciously given to meat packers by members of the Fearn staff. Robert P. McBride, one of the firm's sales representatives, is shown in the exhibit booth.

3. MILPRINT, INC., Milwaukee. A revolving dais on which attractive Pliofilm and transparent packaged meat products were displayed was the feature of the Mil-O-Seal booth. Examining the eye-arresting packages are Jack Manion, sales manager, Milprint, Inc., Adolf Ackermann, president, AA Meat Co., St. Louis, Adolph Ackermann, jr., secretary-treasurer, AA Meat Co., and Charles Hanock, secretary-treasurer, Milprint, Inc.

4. PHIL HANTOVER, INC., Kansas City, Mo. Stainless steel tables for the meat packing plant and sausage curing and seasoning pans were presented in working models and literature at the Pres-Teege booth. Shown holding the firm's sausage pans are Charles Abrams, sales, and T. J. Irey, treasurer, of Phil Hantover, Inc., and Freeman Pepper, secretary, Pepper Packing Co., Denver.

5. JAMISON COLD STORAGE CO., Hagerstown, Md. Actual all-steel, all-wood and trolley type cold storage doors were exhibited in production models in the company's display of cold storage doors. Acting as representatives were J. V. Jamison III, president; A. C. Hoffbauer, Chicago sales office; F. H. Wagner, vice president and sales manager, and J. V. Jamison, chairman of the board.

6. THE FRENCH OIL MACHINERY CO., Piqua, Ohio. A graphic display of various plants in which solvent rendering systems have been installed formed the background for the company's booth. On hand to answer packers' questions about solvent rendering was Joseph C. Mellon, sales engineer.

7. U. S. THERMO CONTROL CO., Minneapolis. A model of the newest Thermo-King truck refrigeration unit, featuring lighter weight and positive cooling or heating, was the main attraction of this exhibit. On hand to answer any packer inquiries about Thermo-King truck refrigeration were the company representatives shown in the exhibit with some meat packer friends: M. B. Green, general manager, U. S. Thermo Control Co.; H. Batt, partner, Philadelphia Boneless Beef Co., Philadelphia; V. L. Elias, field engineer for U. S. Thermo and A. S. Grossman, manager, Philadelphia Boneless Beef Co.

8. DENMAN TIRE & RUBBER CO., Warren, O. The company's line of industrial tires and tubes was displayed and explained by Alec Denholm, sales representative, pictured in the booth.

ALLBRIGHT-NELL CO.
1

2

MILWAUKEE PHILADELPHIA
COUVER
MILPR
SALES OFFICES IN ALL
3

PHIL HANOVER INC
4

JAMISON
5

SWIFT & CO. HARRISON N.J.
H.M. RUBIN CO. LONG I
VALLEY CHEMICAL CO
R.I. GUTTRIDGE CO
6

7

8
STOP
START

MORE BY SLICHTER

steadily increasing proportion of all capital expenditures. Replacements are made more steadily than expenditures for expansions. And yet, even expenditures for replacements are not made very steadily and as yet we have given business concerns no powerful incentive to make those expenditures steadily. They are much larger in magnitude than all of the expenditures which can ever be made, which have ever been made in public works, even in the highest year of expenditures on public improvement and construction projects.

Opportunity for Future

The opportunity to stabilize the economy, to stabilize the expenditures on replacements, is the greatest opportunity that there is, and yet no manager, no business head, is able to go to his board of directors and say, "Here is my budget for the next year. It is true I didn't cut expenditures on replacements very much, and it is true that the business outlook looks pretty uncertain, but still I think we would be wise to go ahead and make the expenditures anyway."

We haven't given them any argument to use before a board, which says, "No, keep liquid. Postpone everything you can postpone." When private enterprise does that, of course, it contributes to the instability. I don't see why we should not say to business concerns, "if you can show that you have spent all of your

EXHIBITORS—6

1. MARTIN H. LIPTON CO., INC., New York. The Lipton smoke unit for clean smoke generation made a hit at the convention. Shown inspecting a miniature model of the unit displayed in the booth are (left to right) Martin H. Lipton, president; I. V. Lay, jr., T. L. Lay Packing Co., Knoxville, Tenn., and Ray Seipp, Lipton salesman.

2. HUSSMANN REFRIGERATION INC., St. Louis. Large colored pictures of Hussmann cases for meats, frozen foods and vegetables, as well as those of a number of self-service cases, made up the booth. Three of the firm's cases were in use in other booths. In the photo is H. B. Vogt, sales promotion manager.

3. KOLD-HOLD MANUFACTURING CO., Lansing, Mich. When this picture was taken it was only natural for Kold-Hold men E. A. Thiele, vice president, and T. O. Lester, manager, Chicago office, to pick the coolest spot in the booth—next to a Kold-Hold plate for truck refrigeration. Translite colored pictures of various truck fleets equipped with Kold-Hold plates, as well as others showing installations of the unit, made up the rest of the exhibit.

4. MIDWEST LUMBER PRODUCTS CO., INC., Chicago. The Midwest booth featured a number of the wood boxes the firm makes for the meat packing industry. Included in the display were boxes for lard, bacon, meat, and canned meat products. Ray P. Pauls, salesman, is shown.

5. H. J. MAYER & SONS CO., Chicago. Conventioneers found the H. J. Mayer & Sons booth a pleasant place to sit and rest while discussing the firm's fine line of "Neverfail" seasonings and meat cures. Shown in the photo are Paul J. Heath, sr., and M. C. Dakin, salesmen.

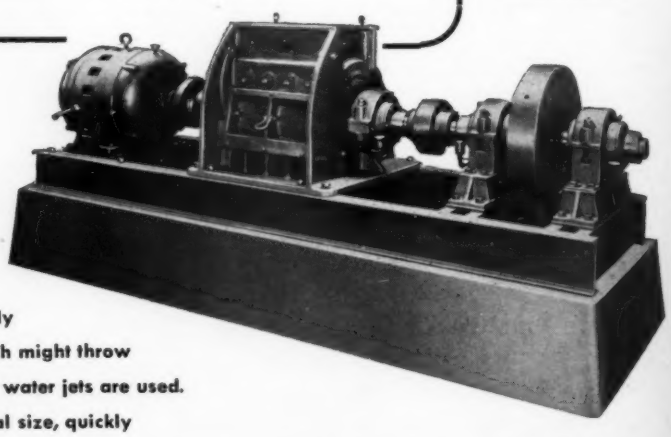
6. THE INTERNATIONAL BUSINESS MACHINES CORP., New York. The largest exhibitor at the convention, the IBM booth featured a number of accounting machines for the meat packing industry. Included in the display were electric punch card accounting machines and time recorders and electric time systems. In the photo are William Greenhouse, president, Renee Packing Co., Inc., Syracuse, N. Y.; H. E. Pim and E. J. McMahon, IBM sales.

7. NATURALUX PRODUCTS CORP., New York. A display of Naturalux liverwurst sausage casings formed an excellent background for the main feature of the booth, a show case of sausage in Naturalux casings. Shown in the photo (left to right): Jess Dorkin, engineer, and Harry Rosenfeld, sales manager of Naturalux; C. A. Albrecht, Reimer Sausage Co., Oshkosh, Wis.; and P. H. Lassar, Naturalux president, and Paul S. Heath, sr., H. J. Mayer & Sons Co., Chicago.

8. STANDARD CASING CO., INC., New York. The exhibit was made up of the firm's new line of stainless steel equipment, meat shovels, meat trucks and stuffing tables. The many friends and customers who stopped to visit were welcomed by Daniel Koss, secretary-treasurer, and Bob Tarton, sales representative.

Cut processing costs, increase profits with M & M MEAT HOGS

14 CE Hog (shown below) with flywheel and motor all mounted on structural steel base.



Assure yourself of greater profits by using equipment which assures greater efficiency. . . use M & M Meat Hogs in your plant. M & M Meat Hogs cut processing costs to the bone, quickly reduce fats, carcasses, viscera, and other slaughter and packing house scrap to uniform pieces for faster cooking. Cylinders are especially designed to prevent collection of meat on inside which might throw machine out of balance, yet no troublesome steam or water jets are used. Easily adjusted to grind pieces to any desired practical size, quickly adapted to all types of meat reduction. Write for literature today.

MITTS & MERRILL

BUILDERS OF MACHINERY SINCE 1854, SAGINAW, MICHIGAN

MARTIN H. LIPTON CO., Inc.

1

HUSSMANN

2

KOLD
KOLD-HOLD

3

4

THE PERFECT CURE
for HAMS BACON AND SAUSAGE MEAT
MAYERS

5

6

7

8

LeFIELL
Cast ALUMINUM
LAVATORY

ADVANTAGES

- MODERN DESIGN
- SELF CONTAINED UNIT
- EASILY CLEANED
- LONG LASTING
- FOOT ACTIVATED VALVES
- CAST IN P-TRAP
- LIGHT WEIGHT

MODERNIZED NECESSITY FOR

every plant. Designed to meet the most exacting standards of sanitation, the Le Fiell Lavatory is functional in every respect as well as pleasing in appearance.

Write For Descriptive Folder

LeFIELL
MANUFACTURING CO
3301 PACKERS AVE
LOS ANGELES CALIF

EXHIBITORS—7

1. THE GRIFFITH LABORATORIES, Chicago. A jumbo can of Prague Powder cure was featured here and representatives were on hand to give information on other items of the Griffith line, such as Griffith's cold pack process of canning hams and the necessary equipment, G-4 antioxidant, Erado cleanser and smokehouse equipment. Pictured in the Griffith booth are J. N. Czarnecki and H. J. Turner, Griffith Laboratories; William Robertson, president, Keystone Brokerage Co., Philadelphia; James S. Scala, president, Gold Medal Packing Corp., Utica, N.Y.; M. C. Phillips and F. W. Griffith, Griffith vice presidents, and W. S. Coleman, sausage superintendent, Geo. H. Meyer Sons, Richmond, Va.

2. TOWNSEND ENGINEERING CO., Des Moines, Iowa. A hand-operated model of the Townsend skinner and flesher was employed to illustrate the operating principles of the fleshing machine with actual pork cuts in the firm's booth. The company also had on display the latest model of its bacon skinning machine. On hand to take care of interested packers were Homer W. White, field representative; Ray T. Townsend, president; Kern E. Blair, field engineer; Andrew F. Townsend, production manager; C. J. Schuepbach, Jim Baker & Associates, Milwaukee, and A. L. Roberts, Townsend field representative.

3. LEIGH SAFETY SHOE CO., Allentown, Pa. A complete line of safety shoes and rubber footwear was on display. These ranged from fancy dress type shoes to full length hip boots. J. E. Ellis, Chicago office, represented the firm.

4. YORK CORP., York, Pa. A steady flow of flake ice from a Flak Ice machine pulled meat packers to this booth. The economical production of ice for sausage making by the unit was explained by J. Donald Smith, advertising sales promotion manager, and George W. Ashlock, Chicago sales office.

5. HOY EQUIPMENT CO., Milwaukee. The focal point of this exhibit was the firm's newest ham press, incorporating a controlled and standardized operating air pressure. Also on display were ham molds and meat loaf molds. Shown explaining the press to an interested packer are Jack Addis, sales, and H. R. Decressey, vice president.

6. INTERNATIONAL SALT CO., INC., Scranton, Pa. An operating model of the Lixate brine making system, a display of the company's various grades of salt for the meat packing industry and an animated cartoon character, held the interest of conventioneers. On hand to explain the advantages of the Lixate method of making brine were D. W. Hengerer, assistant development engineer, New York; S. A. Nystrom, field engineer, Minneapolis and W. M. Johnson, field engineer, Detroit.

7. OAKITE PRODUCTS, INC., New York. Literature and technical information on packinghouse sanitation and the newest all enclosed model of the Oakite vapor-steam cleaning unit were the dominant points of interest to booth visitors. Frank J. McNally and Jack Hayes supplied ready and accurate information on meat packing cleaning problems.

8. THE GIRDLER CORPORATION, VOTATOR DIVISION, Louisville. With the aid of color, a cutaway section of a Votator demonstrated how the unit chills and plasticizes lard under pressure, helping to produce a stabilized product free from separation and highly resistant to rancidity. Pictured in the booth are S. N. Welch, eastern sales manager, and J. E. Slaughter, jr., vice president.

depreciation allowance during the last five years and that in no single year of those last five have you spent less than, let us say, 8 per cent of it, you may qualify for a substantial rebate in your corporate income tax."

If we would put that sort of thing into effect, the head of the enterprise who appears before his board of directors would have an argument. He could say, "Gentlemen, my replacement budget may seem pretty generous to you in view of the uncertainties in the business situation. But we must not forget we are eligible for a substantial tax rebate if we do not fall below 8 per cent of our depreciation allowance."

Our economy is by far the most productive in the world; with 6 per cent of the people, we produce over one-third of the world's goods. We have been increasing output per man hour faster than other economies. That is one of the reasons the British and French are in difficulties, why we have had a chronic shortage of dollar exchange for years. We have, outside of agriculture, 3,500,000 business enterprises. No economy has a comparable number. That means, 3,500,000 places. If you add 6,000,000 agricultural enterprises and include that in, it is 9,500,000 places where innovations may be made, where experiments may be authorized, where you don't have to go on higher up to get an okay for something new, something different. No regimented economy can hope to compete in dynamic drive with an economy which has 9,500,000 enterprises.

However, we still have got to come to grips with the problem of making this terrifically dynamic economy stable and our record of the last year—when we almost reduced taxes, when we took the controls off consumer credit, when we authorized the cashing of the veterans' bonds—shows that we still have yet to appreciate the problem which we must master if we are to keep the economy stable.

CHAIRMAN HARDENBERGH: Next on our program this morning is a discussion of meat education and public relations. The advertising people have developed some plans for the incoming year that are finer and better than any you have had before and I know you will find them interesting.

Before introducing Mr. Rath to you, I want to say just a little bit about the meat educational program and Mr. Rath's part in it. As you know, he was

THE GRIFFITH LABORATORIES
G-4
1

2

LEHIGH SAFETY SHOE COMPANY
industry works in
LEHIGH
3

YORK CORPORATION
York
4

5

STERLING SALT
6

The OAKITE CLEANING
MATERIALS...METHODS...SERVICE
Increase Sanitation Efficiency...Prolong Equipment Life
OAKITE
7

Votator
LARD
A GIRDLER PRODUCT
8

EXHIBITORS—8

1. LINKER MACHINES, INC., Newark, N. J. Two slow-motion linkers, with their working mechanisms either directly visible or reflected by angled mirrors, and a standard production rate linker, linked air-filled artificial casings in this all-activated exhibit. The company's president, R. M. Perkins, and his staff were on hand to explain the economy achieved by linking sausage with the unit.

2. V. D. ANDERSON CO., Cleveland. An easel type brochure listing the meat packers using Red Lion expellers formed the background of the company's booth. Staff members explained to meat packers the advantages of expeller extraction of tallow and grease. Shown in the picture are J. C. Lundmark, Chicago sales office, and J. E. Castino, sales engineer.

3. UNITED CORK COMPANIES, Kearney, N. J. Featuring the various types of cork used in meat packing insulations the company's booth attracted the interest of many meat packers. Shown here are W. C. Pire, vice president, Claire Mont Meat Products Inc., Eau Claire, Wis., and Edwin C. Ward, Sales Engineer, United Cork.

4. CORN PRODUCTS SALES CO., New York. An artistic panel display of the company's Cerelose (dextrose) sugar formed the background for the booth in which representatives explained the many uses of the product in the meat packing industry. Pictured are H. Crown, technical sales, and George McDonald, sales.

5. E. I. DU PONT DE NEMOURS & CO., INC., Wilmington, Del. The importance of impulse buying and the part that proper packaging plays in influencing the buying habits of consumers was the theme of the Du Pont display. Cellophane-wrapped meat products were shown to key-note the slogan, "Shows what it Protects. . . At Low Cost." Pictured facing camera are H. C. Chickering, sales promotion supervisor; W. B. Davis, technical specialist; R. W. MacDonald, merchandising, and A. W. Shaffer, special representative.

6. VILTER MANUFACTURING COMPANY, Milwaukee. Technical information on the firm's vertical booster compressors, shell-and-tube condensers, low temperature unit coolers and other refrigeration equipment was made available to meat packers by the firm's representatives and through bulletins. The latest model of the company's compressors formed the centerpiece for this exhibit. Pictured are O. E. Johnsonbaugh, Vilter distributor, Plymouth, Ind., and R. A. Klokner, Chicago district sales manager.

7. THE ADLER CO., Cincinnati. A complete display of stockinettes used in the meat packing industry, including the stockinettes for smoked meats such as hams, picnics and butts, as well as beef cloths for hot beef shrouding, were shown. In the exhibit picture are J. Kovoloff, sales representative and Ida Green, manager, Chicago Office.

8. NATURAL CASINGS, Chicago. Open type refrigerated display cases featuring a complete line of sausage stuffed in natural casings, free samples of frankfurts, dry sausage and other products, a display of American Meat Institute national magazine ads promoting sausage stuffed in natural casings and a contest offering two table model radios for a correct estimate of the readers reached by the Institute's sausage advertising program, made this AMI natural casing promotional display one of the most attractive booths. Shown are the booth's official hosts, W. B. Walter, casing department, Armour and Company, Chicago and J. E. Septick, casing department, Swift & Company, Chicago.

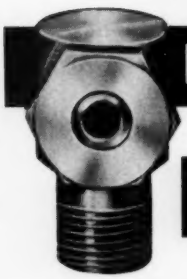
chairman for several years of that group of human spark plugs known as the advertising planning committee, a committee to which this industry owes much for the faithful work which the members of it have done in making your meat educational program an outstanding program in the food field. Because of his part in making some contributions and also because of his ability in the policy-making field, Mr. Rath last year was made chairman of the advertising policy committee. I take pleasure in presenting Mr. Rath to you at this time.

(See Page 238 for Rath)

CONVENTION FLASHES

Fred Glaser, president of Glasers Provision Co., Omaha, Neb., and **F. H. Glaser, jr.**, secretary-treasurer of the firm, were accompanied by their wives, who took advantage of the women's activities arranged by the AMI staff.

The most popular



Brine Spray Nozzle

in America

BINKS "ROTOJET"

There are more Binks Rotojet brine spray nozzles in use today for packing house refrigeration than all other makes *combined*. Working with the meat packing industry, Binks engineers developed the first nozzles ever used in this country for a brine spray refrigeration system. Through constant engineering research and development this leadership has been maintained through the years. Today, Binks Rotojet nozzles are standard in the industry.

Precision made in a complete range of sizes and types, Binks Rotojet brine spray nozzles are designed on the side-inlet, whirl-chamber principle for correct breakup of brine. Bodies and removable tips are machined from high quality bar stock brass. Heavy metal sections insure long life. Rotojet nozzles have no vanes or obstructions to block the flow . . . all internal passages are smoothly rounded, making them practically clog-proof.

When installed as recommended by Binks engineers, Rotojet nozzles assure maximum efficiency in fast-chilling trouble-free brine spray operation.

Write for literature describing Binks Rotojet Brine Spray Nozzles

BINKS MANUFACTURING COMPANY 3114-40 CARROLL AVE., CHICAGO 12, ILL. Dept. A-1 • OFFICES IN ALL PRINCIPAL CITIES

PROCEEDINGS OF THE ANNUAL MEETING OF THE AMERICAN MEAT INSTITUTE

CONVENTION ISSUE

EXHIBITORS—9

1. ZIPP CASINGS, Chicago. On hand to explain to packers the advantages of their parchment casing were James H. Wells and M. J. Leis, sales representatives. A display of parchment Zipp casings used by leading packers formed an interesting background for the firm's booth.

2. JOHN E. SMITH'S SONS CO., Buffalo. This year the famous Buffalo sausage manufacturer introduced a device for interconnecting two stuffing cocks and horns which, when employed with two stuffers, permits continuous sausage stuffing and brings greater speed and profits. Photographs of the firm's silent cutters and grinders were also on display. Technical representatives of the firm were on hand to answer packers' questions. One side of the Buffalo booth was occupied by Hercules Fasteners, Inc., with its Fastie machine and fasteners. This equipment is distributed by John E. Smith's Sons Co.

3. HERCULES FASTENERS, INC., Elizabeth, N.J. An actual demonstration of the ease of making the first tie on artificial casings by using Hercules fasteners attracted a large number of packers to firm's exhibit. Shown demonstrating how the casing is pleated with the die pleater is John F. Mottley, sales manager (bending over the machine) while Joseph J. Frank, president (with back to camera), shows the speed with which a "Fastie" can be placed on the pleated casing and crimped by the crimping machine.

4. HORDER'S INC., Chicago. In its exhibit the national office supply house featured its adjustable chairs and floor type air circulators designed to give the maximum of comfort in hot weather. Shown demonstrating the ease of adjustment on the chair are (left to right) J. M. Kieta, special representative, Don Thompson, and Charles Novotny, sales.

5. THE NATIONAL PROVISIONER, INC., Chicago, The Provisioner's "service centers" took good care of exhibitors' and packers' needs, both in the exhibit hall and on the convention floor. Exhibit and hospitality headquarters directories were maintained and convention notebooks distributed for entering hospitality room numbers. Part of the staff is shown here: (seated, left to right) Dorothy Schlegel, Dorothy Gallagher, Mrs. E. M. Kummer, and (standing) Mrs. Chris Busalacchi and Lillian Carlberg.

ANCO REPRESENTATIVES LINE UP FOR THE CAMERAMAN

Left to right (seated) are A. E. Ozouf, N. J. Allbright, J. G. Allbright, W. D. Broughton and A. O. Lundell. Standing: H. A. Scherer, F. S. Pruitt, H. A. Wright, R. W. Illsley, Bert S. Harrington and H. K. Lindstrom, all of Allbright-Nell Co., Chicago. The photo was taken in the firm's spacious hospitality suite on the club floor of the Palmer House, where a number of hospitality rooms were located.

Hospitality Headquarters

CONGENIAL companionship, information, entertainment and bountiful refreshments were featured at the many headquarter suites maintained this year by industry equipment and material manufacturers, brokers and suppliers who took advantage of the occasion to greet old packer friends and renew business acquaintanceships.

Conventioneers who dropped in to visit with the various host groups were impressed with the extensive arrangements made for their pleasure and convenience. In addition to facilities for relaxation, many of the sponsoring firms had small equipment displays set up in their rooms and plenty of descriptive material regarding their products was on hand for ready perusal.

Large bulletin boards bearing up-to-the-minute lists of hospitality suites and numbers were maintained by *The National Provisioner* at the firm's desk in the meeting hall lobby and at the magazine's booth in the exhibit room. A smaller NP directory was provided on the eighth floor of the hotel where many of the suites were located. Handy pocket booklets were also provided for jotting down individual room references.

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Live Stock Nat'l Bank

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Where Good Friends and Companions Got Together

1. BARLIANT & COMPANY: Entertaining friends and providing them with a ballpoint souvenir pen was the objective of Samuel Barliant and his staff shown here. Left to right: Bob Wilkinson and Karl Axelson, sales; Samuel Barliant, president; R. A. Bateman of Geo. A. Hormel & Co., Austin, Minn., and R. E. Jordan, president of R. E. Jordan Co.

2. ASMUS BROS., INC.: This seasoning firm extended a warm welcome to its many packer friends. Shown dispensing and enjoying the Asmus hospitality are, seated, left to right: L. J. Asmus, M. L. Asmus and H. A. Elliott, all of Asmus Bros, and C. J. Lindeman, secretary of Herrud & Co., Grand Rapids, Mich. Standing: Ben F. Brinkman, traffic manager, The Chas. G. Buchy Packing Co., Greenville, O.; William Froelich, J. V. Elliott and Edmund K. Buchy, superintendent of Buchy Packing Co.

3. UNION STOCK YARDS & TRANSIT CO.: Stockmen, cattle buyers and packers found a cordial welcome in the hospitality rooms maintained by the Union Stock Yards & Transit people. The various aspects of cattle feeding, stock transportation and marketing were discussed in this friendly center. In the picture are, seated left to right: Fred Hartig and H. A. Curran, both of Swift & Company, Chicago. Standing Sam Keating, order buyer; Roy Knutson, Swift & Company, Chicago; and Frank Flynn, John Porcaro and William Daubert, the official hosts.

4. MARATHON CORP.: The hosts here did a fine job in making their guests feel at home. Discussions of the "Kartridg-Pak" weiner bander and the Marathon line of packages for the meat industry was lively. Present as hosts were, seated left to right: W. E. Adcock, Cincinnati sales; W. Roy Welch, central region manager; R. C. Flom, sales promotion manager; A. W. Stompe, general sales manager, and C. O. Bailar, machinery service engineer. Standing: R. E. Bonini, sales representative; E. V. Krueger, sales promotion manager, meat and vegetable packaging, and John Bonini, product development.

5. CANADA CASING CO.: Seated, left to right: Henry Brodecki, sales, The Packers Laboratory, Boston, Mass.; Frank Brodecki, superintendent of the meat division, First National Stores, Somerville, Mass., and Andrew Suski, vice-president, Canada Casing Co. Standing: Chester K. Filip, Boston; William C. Rapp, president, and James Murray, secretary-treasurer, all of Canada Casing Co., are shown in the firm's hospitality rooms.

6. CUSTOM FOOD PRODUCTS, INC.: To assure a cordial welcome to all visitors to their hospitality room this Chicago seasoning house had a well manned host staff. Hosts pictured are, seated, left to right: Roy L. Storck, secretary; A. R. Goodson, treasurer; W. E. Kicker, president, and W. R. Smith, sales. Standing: F. J. Potts, Keith A. Norstrom, J. E. Brown, H. S. Banks and M. J. Phee, all of sales, and J. W. Jones, vice-president.

7. CORN PRODUCTS SALES CO.: The story of Cerelose and its uses in processing sausage, cured meats and specialty products was the most frequent topic of conversation between firm representatives and packer guests in the hospitality suite of this firm. Hosts were, seated, left to right: G. A. McDonald, sales; Ruth McMurry; Mike Mullin, sales, and Peggy Neylon. Standing: Andy Gaeger and Tim Clawson, sales; Maureen O'Neylon; Warren Winter, sales, and E. Robertson, Wilson & Co., Inc., Chicago.

8. JOHN E. SMITH'S SONS CO.: For more than 75 years the name "Buffalo" on sausage manufacturing equipment has been a mark of quality and dependability. Again this year a large staff of representatives from the John E. Smith's Sons' organization were busy dispensing hospitality as well as valuable technical information to their many friends in the meat packing industry. On hand to extend a welcome were: Harry J. Horton, northwest sales; Harold E. Smith, vice president, and Jack Sabean, vice president. Standing: Wm. F. Mueller, Los Angeles representative; Baldwin Smith, sec.-treasurer; H. L. Hunn, chief engineer, and R. A. Hawley, northwestern representative.

9. HOY EQUIPMENT CO.: The many packer guests at Hoy hospitality headquarters were interested in the display of stainless steel ham and loaf molds made by the company. Friendly greetings were extended to the many visitors by Richard Hoy, jr.; Frank Hoy, president; H. R. De Cressey, vice president, and Jack Addis, sales.

10. MONGOLIA IMPORTING CO.: This firm's hospitality headquarters was the scene of much activity as friends dropped in to discuss uses of "Nostrip" casings. Shown here left to right: George F. Reichert, sales New York, and L. Stupnick, sales, both of Mongolia; Mrs. and Mr. Dave Saylor, secretary and manager, Luer Bros. Packing Co., Alton, Ill.; Sigmond T. Terry, vice president, and P. H. Turner, sales, of Mongolia.

11. BASIC FOOD MATERIALS: A popular spot for conventioneers was the hospitality suite of this well known group. The rooms were cleverly decorated with entertaining cartoons and Bake-Rite meat loaf pans and the firm's extensive line of seasonings were the main topics of discussion. Hosts were, front left to right: F. S. Boyer, sales; Harry Bass, owner of the Midwestern Meat Co., St. Louis, and Mrs. and Mr. M. Twigg of Walgreen Company. Rear: C. M. Cox, Daryl F. Houdeshell, Ray F. Beerend, president, and Hollen A. Grade, all of Basic.

12. THE GLIDDEN CO., SOYA PRODUCTS DIVISION: Reminiscing over their pleasant experiences as hosts to the firm's many packer visitors are the company hosts in a corner of their hospitality room. Left to right: P. J. Preis, E. A. Buelens, H. S. Peiker and J. E. Yeager.

CONVENTION FLASHES

Melvin Haas, vice president, and George Haas, president, both of Haas-Davis Packing Co., Mobile, Ala., brought their wives to the meeting.

PROCEEDINGS OF THE ANNUAL MEETING
CONVENTION ISSUE
OF THE AMERICAN MEAT INSTITUTE

Rest and Relaxation For the Convention Weary

1. NORTH AMERICAN CAR CORP.: Packers were greeted by several representatives of the refrigerator car company. Pictured in the company's hospitality room are (seated, left to right): A. K. Ingalls and L. H. S. Roblee of North American Car Corp., and R. F. Gray, executive vice president, Geo. A. Hormel & Co., Austin, Minn. Standing: F. O. Leffler, North American Car; T. E. Colescott of Hormel; E. J. Hansen and B. A. Berry of North American; H. A. Willig and W. F. Fiala of the Rock Island Railroad, and J. Flanagan, North American.

2. THE GLOBE CO.: Entertainment and refreshments were enjoyed by a host of guests and visitors at the elaborate hospitality headquarters of Globe in the Governor's suite. Technical advice was available on all forms of packinghouse equipment manufactured by the company. Included in the host delegation were (seated, left to right): Charles D. Bonifield, vice president in charge of manufacturing; R. L. Gambill, executive vice president; C. E. Gambill, president; and George L. Hoyt, vice president. Standing: Jake Lissner, H. Kollmorgen, W. J. Worcester, John Keth, George H. Greene, L. J. Spencer, sales manager, Leo J. McQueen, and Willis D. Moorhead.

3. VILTER MANUFACTURING CO.: Friendly representatives of this refrigeration equipment manufacturing firm are shown in their hospitality room gathered about a visiting packer. Shown here (seated, left to right): Mrs. Deane Perham and Mr. and Mrs. T. T. Heckworth, president of the Florence Packing Co., Florence, Ala. Standing are the Vilter hosts: Deane Perham, H. H. McKinnies and O. E. Johnsonbaugh.

4. SYLVANIA DIVISION, AMERICAN VISCOSE CORP.: One of the busy spots in the hotel was the suite of Sylvania where the firm's staff extended hospitality to members of the meat industry. The congenial staff members shown here (seated, left to right) are: W. J. Butler, E. A. Burchard, V. N. Winkler and L. E. Nash, all sales representatives. Standing: R. D. Handley, advertising manager; L R. Swift, sales, and H. W. Wernecke, manager, advertising sales, *The National Provisioner*.

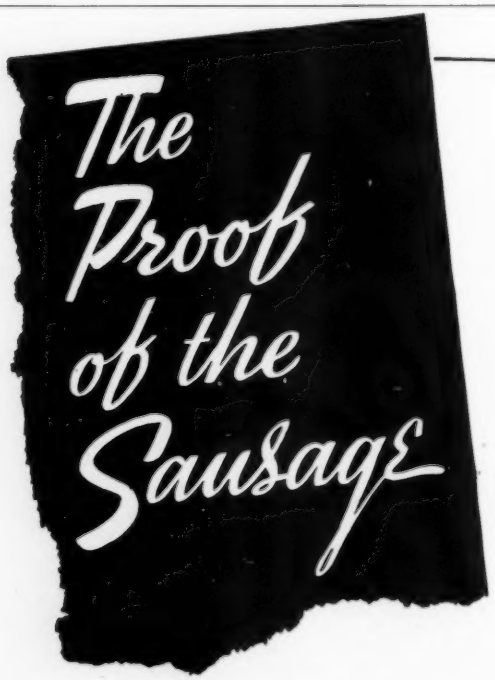
5. MILPRINT, INC.: Seated, left to right, are Jack Zevick, jr., Cliff Williams, Bob Zigman and L. R. Zimmerman, all Chicago representatives. Standing: Frank Zahrt, divisional sales manager; Frederick C. March, divisional sales manager; Jack Manion, sales manager; Russell Faulkner, sales, and William Bain, manager transparent division sales. Visitors found plenty of good ideas on packaging, as well as friendly hospitality, and were posted on packaging and merchandising trends.

6. PRESERVALINE MFG. CO.: The "Presco" hospitality suite was a popular spot again this year. As a result of the company's 67 years of service in supplying "Presco" curing materials and "Boar's Head" seasonings to the industry, many meat processors seek the staff's help on curing and seasoning problems. Pictured in the suite are (seated, left to right): William E. Sammons, Drummond Meat Co., Chillicothe, O.; Ted Brown and E. Gooden of Preservaline, and Peter Thome, sausage maker, Mt. Sterling Packing Co., Mt. Sterling, Ky. Standing: A. A. Schaffner, Preservaline sales; E. G. Straub, Drummond Meat Co.; George Flanery, Flanery Sausage Co., Milbank, S. D.; Hans Daube, Daube Packing Co., Corfu, N. Y., and Lee Kenyon, secretary of Preservaline.

7. AMERICAN CAN CO.: A large group of representatives from CanCo entertained guests. The latest research developments of American Can laboratories were described to visitors by the technical representatives present. Hosts were (seated, left to right): H. A. Pinney, H. H. Howry, W. J. Mullaley and M. P. Cortilet. Standing: G. H. McDonnell, J. B. Wiebers, L. B. Drake, E. E. Finnegan and W. C. Schultz.

8. CHICAGO COLD STORAGE DIVISION OF BEATRICE CREAMERY CO.: This suite was well patronized by conventioneers. Refreshments and information were provided by the hosts. Shown here (seated, left to right) are: Tom Casey, superintendent, and M. J. Loughlin, both of Hygrade Food Products Corp., Chicago, and J. H. Edmondson of Chicago Cold Storage. Standing: R. J. Lamphaer, traffic manager; A. F. Winston, and W. A. Kron, Chicago Cold Storage.

9. DENNISON MFG. CO.: Of special interest to meat packer guests at the Dennison hospitality suite was the demonstration of the company's improved frankfurt banding machines. Staff members dispensing hospitality included R. S. MacKenzie, Framington, Mass., and E. L. Holloway, B. L. Sauter and S. A. Tejcek, all Chicago sales representatives.



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CASINGS · MEATS

Where Packers and Suppliers Exchanged Greetings

1. TRANSPARENT PACKAGE COMPANY: Teepak's air-conditioned headquarters was one of the high spots of the convention. Seated, left to right, are C. B. Smith, vice president; Seymour Oppenheimer, president; W. J. Hullinger, assistant sales manager and R. R. Stigler, sales manager. Standing: Emil Meyer, Marty Lynn, E. L. Weber, Larry B. Tauber, Hank Flonacher, Bill Collar, Ray O'Brien, Erv. Martin, Maury L. Hoffman, Ernie Webster and Don Barraca.

2. TRAVER CORP.: The Traver hospitality suite at the Palmer House was a popular meeting place for the firm's many friends. Much interest was displayed in the company's line of transparent wraps and in the new aluminum foil ham wrappers now being featured. Among the hosts present at the headquarters were V. J. Sheridan, sales manager, Clint Ackerman, Carl Dickenson, Jim Costello, Erin Reis, Wilson Brown and Elmer Nielsen.

3. OPPENHEIMER CASING COMPANY: This firm featured a cartoonist to sketch guests in its club room. Hosts were (seated left to right): Edward H. Oppenheimer, vice president; L. A. Curran, Toronto mgr., and M. S. Holstein, vice president. Standing: Steve Greenfield, Joe Burke, Lee E. Breadman, Frederick H. Strauss and C. Fels.

4. E. G. JAMES CO.: A cordial greeting was extended at the E. G. James hospitality headquarters and a large number of guests dropped in to relax and visit with the personnel of the machinery division of this firm. Hosts were Ray Williams, Ed Price, Frank Legatzke, Ted Williams, Frank Currier, Ed Hendricks, John Sheetz and Warren G. Henry.

5. WILSON & CO., INC. Casing sales department: Grouped for the picture are company representatives who met in Chicago at convention time. Seated, left to right, are T. R. Selby and D. E. Jacobs, Chicago sales; Al Wilson, manager of casing sales; John Munro, assistant manager of casing sales, and J. A. Girten, Chicago office. Second row: J. J. Carrington, Boston; A. H. Phillips, Kansas City; F. J. Bauer, Albert Lea, Minn.; H. W. Willmarth, Omaha; C. A. May, Philadelphia; N. C. Sapsford, New York, and Henry Berstein, Chicago, all of sales. Rear: L. C. Sauter, Minneapolis; Carl Welch, Oklahoma City; J. J. Robinson, Columbus, O.; D. D. Riddle, Chicago; L. N. Batkiewicz, Syracuse, and Ken Adams, Los Angeles.

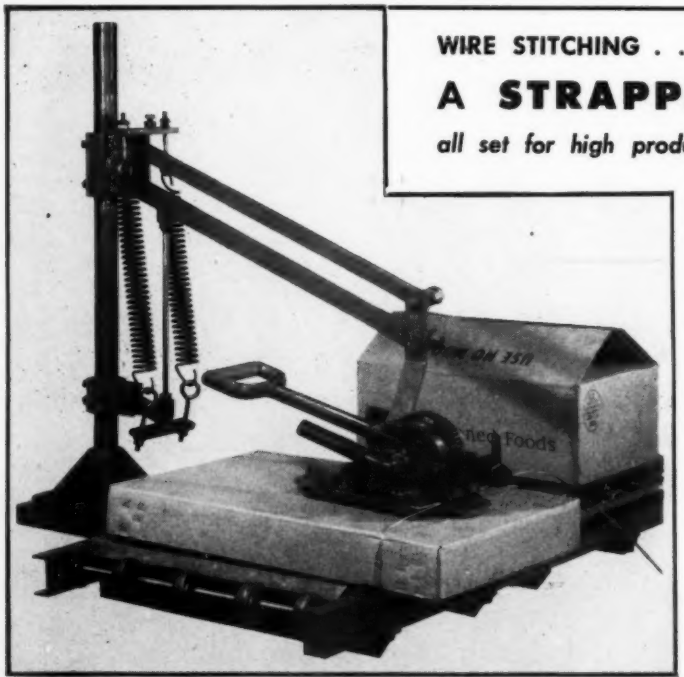
6. FEARN LABORATORIES, INC.: A large number of conventioneers visited this firm's hospitality suite where they were entertained and welcomed by the hosts shown in photo. Seated, left to right, are Don Talbot, Sam Selfridge, P. G. Phillips, sales manager packinghouse division, and C. B. Hill, jr., president. Standing: J. B. Kleckner, general sales manager, G. W. Young, Ed Asbury, J. D. Poole, Henry Moore, Jake Akins, J. E. Whittle and R. B. McBride.

7. BUILDICE CO., INC.: On hand to discuss the newest features of the company's refrigerating equipment and to act as hosts to packer visitors were the following representatives shown in their hospitality rooms. Seated left to right: R. B. Crawford, John Heinzelman, president, N. J. Kuhn and R. A. Espe. Standing: K. N. Critchfield, Worthington Pump & Machinery Co.; J. A. Schmitz, advertising manager; J. G. Rea and C. B. Clark, all of Buildice, and R. J. McLaren, Chicago architect.

8. THE GRIFFITH LABORATORIES, INC.: The Griffith staff played host to visiting conventioneers who were served with properly seasoned sausage and specialty meats and otherwise made welcome. Shown in the picture are, seated left to right: W. C. Young, M. C. Phillips, vice president; C. L. Griffith, president; F. W. Griffith, vice president; Harry Gleason, vice president and sales manager, A. E. Maren, vice president and Howard A. Levy. Standing are H. J. Turner, L. W. Levy, A. P. Lovell, R. R. Dwyer, W. A. Gee, Albert Szafranski, O. W. Moon, superintendent of Murray Packing Co, Plainwell, Mich., and Paul H. Murray, general manager of the packing firm, and Bob Stutz and R. N. Crider, of Griffith.

CONVENTION FLASHES

John E. Groneck, who is assistant to the president and in charge of sales for the Krey Packing Co., St. Louis, celebrated his twenty-fifth year in the meat industry as he attended the meeting.



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Just a Few of the More than 2500 present

1. GENERAL AMERICAN TRANSPORTATION CORP.: Good meat transportation was the main topic discussed here. The hosts and visitors shown (front row, left to right) are: R. I. Loewenstein, secretary, Superior Packing Co., Chicago; E. J. Larson, car service agent, General American, Chicago, and E. H. Gardener, western traffic manager, Union Refrigerator Transit Lines, a division of General American. Rear line includes W. R. McPherson, C. M. St. P. & P. R.; E. T. Miller, Pennsylvania Railroad; D. E. Aylward, Union Refrigerator Tranit Lines, and Granger Smith of the Milwaukee road.

2. INDEPENDENT CASING CO.: A friendly and courteous welcome was extended to all visitors at this casing house hospitality room. Grouped together in the photograph are the company's hosts. Seated, left to right, are Sam Isaac, New York manager; Charles Raynor, vice president, and Herb Strauss. Standing: Mike Deming, Mike Krauss, Herb Altheimer and Bill Raynor, all of the sales staff.

3. J. S. HOFFMAN CO.: The firm's sausage, cheese and canned meat specialties were employed in an unusual display in the hospitality suite where many friends were entertained. The official hosts shown here are (left to right): R. E. Hawley, Hy Mizruchy, promotional manager; J. J. Zahler, vice president; Harry I. Hoffman, president; M. E. Bush, sales manager, and William Zeisel, C. A. Faye and S. S. Clayman.

4. A. E. STALEY MANUFACTURING COMPANY: Representatives of the well-known Decatur firm are shown in their headquarters suite discussing binder problems with a meat packer, Left to right: W. W. Starks, assistant sales manager, industrial division, and Harry C. Homer, meat technician, both of Staley; William Young, Decatur Packing & Provision Co., Decatur, Ill.; P. J. Braun, meat technician, and Henry Volle, Staley's asst. ad. manager.

5. ENTERPRISE INCORPORATED: Packer visitors showed lively interest in the new power-driven carcass splitter recently added to the Ebsco line of packinghouse equipment. Hospitality was provided by (seated, left to right): Ronald H. Marks, vice president; Sam Marks, president, and H. K. Hirsch, sales manager. Standing: Don Kemp, Virgil Austin, Pete Chamlee and Ray Didier, all of the sales staff.

6. CONTINENTAL CAN CO.: That canned meats and meat food products are of great interest to the meat packing industry was evidenced by the large number of guests entertained at the Continental Can Co. headquarters. Packers and hosts pictured (seated, left to right) are: C. L. Halladay, superintendent of Derby Foods, Inc., Chicago; J. J. Lukitsch, sales, and J. J. Hewitt, advertising manager, Agar Packing & Provision Corp., Chicago. Standing: R. J. Cline, sales; Wilson B. Larking, Chicago district sales manager; J. R. Hughes, sales, and William F. Coleman, Chicago.

7. PREMIER CASING CO.: Welcome hospitality was extended to all of the firm's meat packer guests in its spacious suite. Pictured here (first row, left to right) are: Dan Summer, Leo Weglein, Jack Shribman and Al Weil. Rear: Jean Hax, Herman Goldberg, Anton Heilig, and Bob Bechstein, all representatives of the firm.

8. DIAMOND CRYSTAL SALT DIVISION, GENERAL FOODS CORP. Representatives spent much of their time counseling packers on the best types of salt for various products. Shown in the room (seated, left to right) are: C. C. Van Dyne, district representative, and W. J. Ross, manager of field sales, Diamond Crystal Salt, with C. J. Dunn, manager of field sales, Colonial Salt Co., and J. Chisholm, Chicago division manager. Rear: L. M. Fitzhugh and J. Conklin, district representatives; G. W. Bostrom, merchandising; J. B. Smith, division manager of Colonial Salt Co., and C. E. Prickett, representative.

9. R. W. TOHTZ & CO.: This family of packinghouse equipment experts housed in their hospitality headquarters extended a cordial welcome to all. Seated, left to right, are: H. O. Tohtz and H. W. Tohtz, R. W. Tohtz & Co., St. Louis, and Howard M. Wilson, Watertown Abattoir, Watertown, S. D. Rear: N. S. Chapin, Arkhyd Packing Co., Wichita, Kans; Stan Cash and Harry Becker, R. W. Tohtz & Co.

10. OSCAR MAYER & CO.: One of the most popular hospitality rooms was the suite maintained by this meat packing firm. Shown here are some of the many industry personalities who dropped in to enjoy the good companionship available. Oscar Mayer's staff was headed by G. A. Althaus, vice president, Chicago, and W. T. Murray, vice president, Madison, Wis.

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These Groups Played Host to Many Packers

1. SAYER & CO.: A large number of Sayer men were on hand in the firm's hospitality suite and a pleasant evening was enjoyed by packer visitors to the rooms. Music, entertainment and refreshments added to the general atmosphere of relaxation. Hosts shown here are, seated left to right: H. W. Townsend, sales manager; Ed Feih, Jack Braun and L. R. Hausman. Rear: D. G. Divine, F. Meyer, K. M. Georgi, M. Warner and G. E. Stutz.

2. BERTH. LEVI & CO.: Relaxation, refreshments and valuable information relating to casing uses were available at the headquarters of this Chicago firm. Pictured here are the hosts who saw to it that packer guests were made comfortable: Irving Sloman (standing at left) and Leonard Weill. Others on hand were Mike Baker, Al Byk, Al Freud, Stanley Gershel, Lester Lyons, Egon Hertz, N. B. Berkowitz, Duke Reichenbach and Jake Reichenbach.

3. SPENCER KELLOGG AND SONS CO.: Official hosts photographed here include, left to right: Al Runkel, Joe Brilley, assistant manager of soya flour department, Mrs. and Mr. Floyd Crego and Glenn Parr.

4. TOWNSEND ENGINEERING CO.: The Townsend hospitality suite was a favorite stopping place for packers at the AMI meeting. The Townsend skinning and fleshing machine and the bacon skinner were subjects of favorable comment. Pictured are, seated left to right: Mrs. James J. Driscoll and James J. Driscoll, president, Colorado Packing Co., Inc., La Junta, Col. Standing: Kern E. Blair, field engineer; Ray T. Townsend, president; Homer W. White, field representative, and Andrew F. Townsend, production manager, all of Townsend Engineering Co.; Mrs. and Mr. Thomas Sisson, accountant, Colorado Packing Co., and A. L. Roberts.

5. JAMISON COLD STORAGE DOOR CO.: J. V. Jamison, jr., chairman of the board; Stanley Baldwin, district manager; Fred H. Wagner, jr., vice president and general sales manager, and J. V. Jamison, III, president, were hosts.

6. THE WM. J. STANGE CO.: The spacious hospitality rooms of the Wm. J. Stange Co., were the scene of much activity at the meeting. In their club-like atmosphere a large number of guests were entertained by the capable staff and many discussions took place regarding the Stange "Cream of Spice" line of seasonings and N.D.G.A. antioxidant for lard. Entertaining in the rooms were (seated left to right): Ed Marum, sales manager; Bill Durling, president; John Terry and Al Fonyo. Second row: Bill Hutchison, Dave Nay, Irving Zeiler, Boyd McKoane, Vern Berry and Ted Lind. Rear: George Foster, Ed Schoenfeld, Ken Koepke, Seb J. Davin and Pee Wee Hughes.

7. R. F. NORRIS & ASSOCIATES: Testimony to the spirit of friendliness and good fellowship which prevailed in the various hospitality headquarters is this informal photograph taken in the suite of R. F. Norris & Associates. Representatives of the firm on hand to greet packer friends and guests were headed by Roy Norris, head of the firm.

8. ST. JOHN & CO.: Guests at the St. John hospitality headquarters were welcomed by the capable staff which included (seated, left to right): H. J. Riley, engineer; Oscar Biedermann, president, and J. R. Ristow, chief engineer. Standing: J. C. Luehrsen, superintendent; A. Lubansky, sales; Blair Adams, sales manager; K. C. Luehrsen, purchasing agent, and D. H. Good, personnel director. On display in the suite were cut-away samples of the firm's popular "Neotread" truck wheels for packing plant use.

9. READY FOODS CANNING CORP.: Representatives of Ready Foods and the Leeds Meat Company on hand to greet friends and explain their line of canned products are, left to right: F. J. Bethley, assistant to the president, Leeds Meat Co.; J. W. Sparr, vice president; Mrs. Rubin, president's secretary; Harry Miller, vice president; Rogers Clark, manager, and W. Smith, all of Ready Foods, and J. F. Hurley, president, Leeds Meat Co.

10. THE VISKING CORP.: Visking headquarters at the Palmer House was a popular meeting place for many conventioneers. The large group of Visking men on hand to entertain visitors included (front left to right): L. E. Houck, assistant director sales; R. Freund, Don Roberts, Chuck Whitford, Bob Lindahl and J. V. Smith. Rear: John E. Spiering, H. A. Lotka, sales supervisor, F. G. Adams, district sales manager, C. A. Beckman and W. R. Hemrich.

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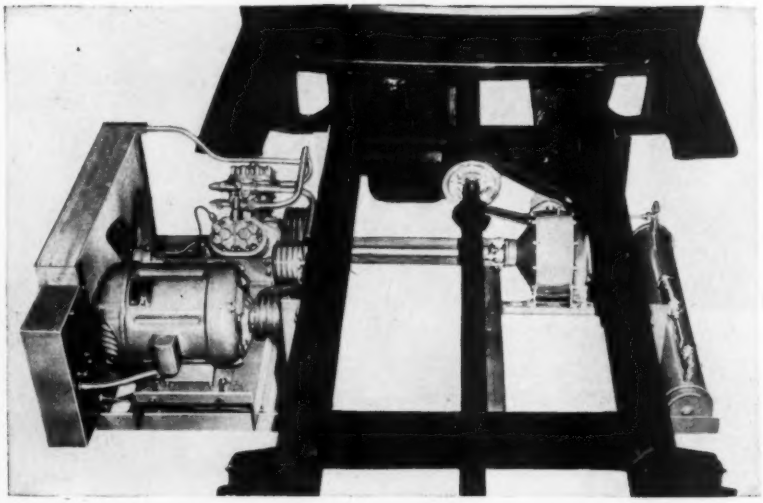

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Easy Chairs and Talk For Room Visitors

1. JOHN J. DUPPS COMPANY: A renderer was enjoying the usual Dupps hospitality when this picture was taken. Left to right are Roy W. Burbank of the Burbank Animal By-Products Co.; John A. Dupps, president of the equipment company; Frank J. Norris, Dupps sales manager, and R. L. McTavish, vice president.

2. AGAR PACKING & PROVISION CORP.: This Chicago pork packing company held open house for its many friends in the meat industry. Shown with a few of the guests is Michael Shea, Agar product manager (second from left), acting as host.

3. UNITED STATES COLD STORAGE CORP.: Discussion of the firm's facilities for blast freezing and specialized meat storage took place while refreshments were dispensed. Shown in the picture (seated, left to right) are: Elmer Aird and Tom Walter, both of U. S. Cold Storage. Standing: E. T. Hansen, North American Car Co.; T. E. Evans, U. S. Cold Storage; E. L. Hirsch, superintendent, Guggenheim Packing Co., Chicago; R. M. Conner, vice president, U. S. Cold Storage, and A. K. Ingalls, president, Northwestern Refrigerator Line.

4. J. T. MURPHY CO.: This group of packers and brokers included (left to right, front): W. S. Riley, Philadelphia; Sid Lang, Columbia Packing Co., Boston, Mass., and W. H. Bach, The Cudahy Packing Co., Chicago. Rear: J. C. O'Leary, J. T. Murphy Co.; J. K. Stevens, superintendent of Krey Packing Co.. St. Louis, and John E. Groneck of the same firm, and J. T. Murphy of J. T. Murphy Co.

5. R. H. MONSON CO.: A favorite gathering place for many packers was this broker's hospitality room. Grouped in a conversational huddle (left to right) are: E. J. Mandernack, Buford & Mandernack, Chicago; R. H. Monson of R. H. Monson Co., Chicago; Ted Broecker, president, Klarer Provision Co., Inc., Louisville, and Leo B. Lavin, president, Sugardale Provision Co., Canton, O.

6. MARTIN H. LIPTON CO.: Gathered around a scale model of the company's smoke unit are the hosts and some of their packer friends. Left to right: Ray Seipp of the Lipton organization; Byron Getzoff, sausage superintendent, Golden Oak Packing Co., Chicago; Edward W. Olszewski, vice president, and W. Santen, superintendent, both of the American Packing Co., St. Louis, and Martin H. Lipton.

7. PHIL HANTOVER, INC.: Recent expansion of the facilities of this Kansas City firm enables it to better serve its growing clientele. Hospitality was dispensed by the staff, including (seated): Leonard Hantover, vice president and Phil Hantover, president. Standing: C. L. Abrams, sales, and T. J. Irey, treasurer of Phil Hantover, and V. J. Gerwert, president, Crocker Packing Co., Joplin, Mo.

8. CINCINNATI BUTCHERS' SUPPLY CO.: This delegation did a fine job entertaining their many friends in their hospitality suite. Much of the conversation, of course, was about the complete line of "Boss" packinghouse equipment. Hosts shown (seated, left to right) are: Wm. C. Schmidt, Herman C. Schmidt and C. Oscar Schmidt. Standing: E. M. Kahn, New York office; Walt Hammann, Chicago office; Fred W. Stothfang and Charles Abrams.

9. MEAT INDUSTRY SUPPLIERS, INC.: On hand to dispense refreshments and hospitality to visiting packers were the firm's official hosts shown here. Left to right: Joe Finn, general manager; Ralph Kaufman, sales; Sol Morton, president, and John Lowe and John Alford, sales.

10. LINK-BELT CO.: Meat packers seeking ways of reducing handling costs made this firm's hospitality suite a popular spot. Shown are the company's material handling experts who acted as hosts: L. P. Spillman, E. A. Wendell and Joe Durant.

11. CINCINNATI COTTON PRODUCTS CO.: Representing this progressive firm in its hospitality suite were (left to right) Dave Rose, eastern sales; Sydney Goldfarb, president; Harry Freedman, midwest sales; Louis Goldfarb, chairman of the board, and B. W. Campton, president, Meat Packers, Inc., Los Angeles. Expanded facilities enable the firm to increase service.

12. H. P. SMITH PAPER CO.: One of the most popular spots at the convention was the H. P. Smith hospitality suite. A throng, including important people in the meat packing industry from all parts of the country, visited the rooms and enjoyed the welcome of the firm. Hosts were: "Ev" Shelby and George Malmgren, both of sales; Ed Schoenthaler, vice president and Jack Pendexter and Earl Townsend, sales.

SERVING THE MEAT INDUSTRY
FOR OVER 40 YEARS

ARROW MILLS
Importers & Grinders of
PURE SPICES

Van Loan & Company, Inc.

176 Franklin Street, NEW YORK 13, N.Y.

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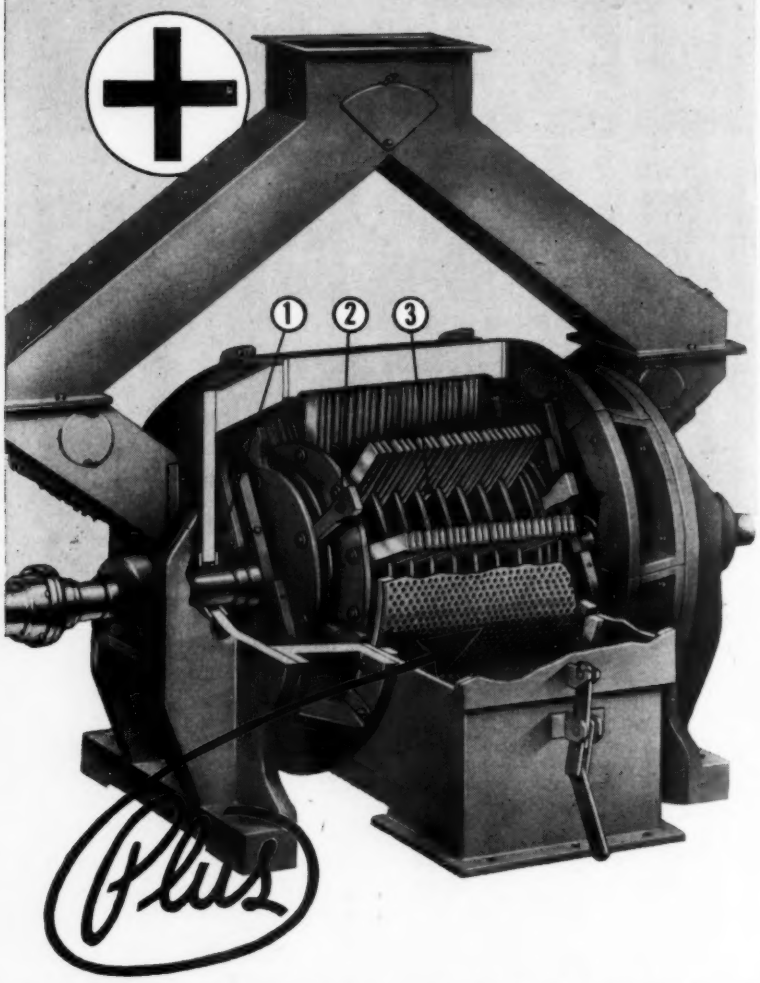
TRIPLE REDUCTION



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The Prater Dual Screen Pulverizer offers you the many advantages of the Triple Reduction Process, plus the added screening efficiency of the Dual Screens—that cover 70% of the final sizing chamber. The combination of pre-crushing (1), secondary crushing and peripheral distribution (2), the wide selection and arrangement of the final sizing blades (3), together with dual screens and flexibility of screen selection results in accurate control of granulation.

Write for full information.

PRATER PULVERIZER COMPANY

1515 South 55th Court • Chicago 50, Illinois

PRATER PULVERIZERS

INSTITUTE MEMBERS SPEAK ON AMI MEAT EDUCATION PROGRAM

(Continuation of Session 4 from page 222.)

R. A. RATH: I am sure all of us in this industry who listened to Mr. Specht, president of Armour and Company, on the subject "Tomorrow's Customer" could not help being impressed by his subject and his conclusions. I think all of our employes, including salesmen, as well as producers and retailers would gain a great deal from reading a copy of his talk. It indicates the keen interest his company is taking in the meat educational program. His remarks also indicate that a great deal of flexibility is necessary in our educational program.

R. A. RATH

As a matter of policy the flexibility of our program has been maintained as evidenced by the emergency use of newspaper paid space to publicize information regarding prices and profits in the industry, as well as the use of the commercials on the Fred Waring program. It will be the continued policy to retain flexibility in the program to meet current situations as they may develop.

We must keep in mind, however, the "Original Objective" which is: "The basic policy of the meat advertising campaign is to sell meat in general, from a nutritional standpoint, and to illustrate this basic story of meat with specific products at times of the year when they are available in volume and offer the greatest value to the consumer." While keeping this objective as our guiding principle we propose to conduct a program principally in newspapers and by radio to publicize the service of the industry, ratio of profit to sales and the economics of "what makes prices." Mr. Smith will cover this more in detail as to what the advertising planning committee and the public relations committee have planned. The public relations objective is: "The basic objective of the meat industry public relations advertising program is to build public knowledge and appreciation of the fact that the meat packing industry of this country efficiently performs an important service and performs this service for a very small margin of profit."

We of the Rath Packing Co. feel that the meat educational program has been effective in not only developing a greater public acceptance for the nutritive value of meat in the diet, but has been an effective medium of instilling a greater interest on the part of our sales organization in the cause for "meat on the table." This last point alone—and this is only one of many advantages the program has created—is one of the

major reasons for our financial support of the program.

I want to express appreciation to the members of the advertising sub-committee, as well as the general planning committee, the Burnett agency and the Institute staff for their accomplishment during the past year and to ask the membership for active support of the program during the coming year by participation in the program. It is an investment, and not an expense.

CHAIRMAN HARDENBERGH: Our next speaker, despite his youthful appearance, has been in the meat packing industry for more than 20 years. In fact, I think next year he will become eligible for a silver button. Mr. Buchy is a graduate from the school of business of the University of Chicago and also the Institute of Meat Packing. The Chas. G. Buchy Co. of Greenville, O., with which he is associated, was started in 1901 by George's father as a retail business and his father, I am glad to say, is here today as are his sister, brother and brother-in-law and another brother is at home taking care of the business.

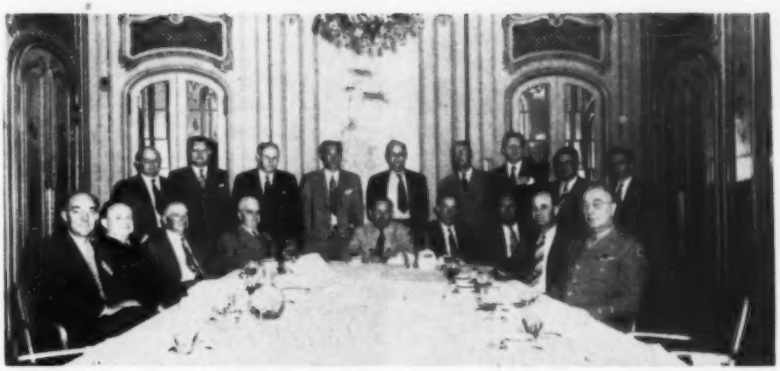
Now, by hard work, industry and thrift, the retail business founded by Mr. Charles Buchy was expanded in 1911 into a wholesale slaughtering and processing operation. George, who is here with us today, has been a diligent member of the advertising and planning committee since its inception and I am very glad to present him to you at this time.

BUCHY GIVES VIEWS

GEORGE T. BUCHY: I have been asked to express my own viewpoint and that of our own company concerning the meat educational program. Our company has been a participant in the American Meat Institute educational advertising program since its founding by the Institute of American Meat Packers, now known as the American Meat Institute. I, personally, and likewise our company, feel we have received many benefits from the meat educational program.

All of us realize we have just come through a war with greatly increased take home pay for all workers, thereby enabling more people to spend more money for meat. Teaching consumers that meat is good to eat, healthful, nutritious and satisfying has helped to increase the per capita consumption of all meat to an estimated 158 lbs. per person in 1947, as compared with an annual rate of 138 lbs. in 1939.

We all hope we will be able to expand the per capita consumption of meat to further higher annual rates in the years ahead. Realizing that per capita consumption of meat is dependent upon livestock supplies, and livestock supplies in turn dependent on feed supplies and other natural hazards, perhaps meat packers should now advocate increased production of feed supplies and livestock so consumers will have more meat available for consumption in future.



EX WAR MEAT BOARD MEMBERS HOLD SECOND ANNIVERSARY GATHERING

Shown here are some of the old members of the now defunct War Meat Board as they met at luncheon in the Palmer House to celebrate the second anniversary of the termination of the board's activity. Many high officials of the packing industry and government representatives were present for the occasion.

Who, then, can say all packers, small or large, have not benefited from the meat educational program? These figures seem to indicate no distinction between brands or individual companies and everyone in the industry, small or large, benefits when per capita consumption of meat increases.

The purpose of the meat educational program is to provide an expanding meat business. This should help all of us to earn a sufficient return on our investment, to enable us to keep up with other manufacturing industries in plant, equipment, research, marketing and security for all who work in the meat industry.

I have been selling meat for the greater part of 24 years. Each year I have heard the same story, "Meat is too high in price." It made no difference whether pork loins were 6c or 60c per lb. wholesale. Meat was still too high! Of course, the prices of luxury items are never too high. Just meat—the essential. I firmly believe the educational program is helping to break down consumer resistance and consciousness toward the attitude of high prices by teaching the merits of meat in the diet.

PACKER AND AMI MAN

Robert T. Lay (right), sales manager of the T. L. Lay Packing Co., Knoxville, Tenn., talks over current industry problems with H. H. Armstrong of the Institute staff. The men were photographed in the registration lobby.

A recent survey shows the housewife thinks all meat packers retain 32c out of each dollar of sales, while the average man of the house thinks meat packers are lining their pockets to the tune of 16c of each dollar of sales. There isn't one of you sitting in front of me who would like to trade a 5c return on a dollar of sales retained as an average in all manufacturing industries over the past years, as compared to our very small 1.2c per dollar of sales retained by the meat industry.

As I have said before, a sufficient return is needed to enable the meat industry to keep up with other manufacturing industries in plant, equipment, research, marketing and security for all who work in the meat industry.

The board of directors of the Institute recently directed a certain, at present undetermined, amount of money of the educational program, to be spent on public relations to tell the economic and the profit story of our great meat industry. This is a notable and really worthwhile project for all of us. A project long overdue, one which should have been started years ago. This enlarged program can be accomplished only by the united efforts of all packers, small and large.

The expanded program would be much too big for any single company in the industry to handle successfully. The time has arrived for the industry to stand on its own feet and tell the facts. It's better for us to tell our own story than to have someone on the outside telling it for us, often with untruths or half truths.

Small packers — any packers — can make the program pay out for them. Here's how. Tell your customers you are participating in the American Meat Institute educational and advertising program in order to make more business for them, and for yourselves. You might as well admit you are selfish in

wanting to expand your business. Just blow your own horn a bit. Tell them your story on your stationery, your invoices, your products, your delivery equipment, etc. Eliminate all petty advertising of doubtful value in relation to dollars spent.

Tie the Institute advertising in with your own company advertising schedule. Last, but not least, join the meat educational program by participation, if you have not already done so. You will find participation a wise investment to insure future business—a sort of future business insurance policy—not a meaningless or wasteful expenditure. You will then have a part in the program that has already been bringing good results for you and for all of us.

Regardless of what the operating results for the year 1947 might be, it is the intention of our company to participate. We consider participation a good investment, not only for our own company, but also for any other small or large packer, in order that all of us may enjoy an expanding meat business.

CHAIRMAN HARDENBERGH: Our next speaker has had a great deal of experience in the meat packing industry on both sales and advertising aids. He is in charge of Wilson & Co.'s advertising and is noted for his ability to make advertising dollars yield a fruitful return and for his ability to speak in an entertaining and effective way. He is chairman of the advertising planning committee. I take pleasure in presenting him to you, and I know you will take even greater pleasure in listening to him. Don Smith.

DON SMITH'S TALK

DON SMITH: The powers that organize the program for this convention thought this year it would be wise to have a change of pace. I am not going to talk about these charts that are up here. For seven years Dick Heath has done a very eloquent job of taking all these charts, various advertisements and all the other things we do, and cramming a two and a half hour talk into 40 or 50 minutes. I wouldn't attempt to talk about the charts after all the years that Dick has done it so well.

DON SMITH

When they decided on a change of pace and asked me to say a few words, they were going to prepare a speech for me. They did, in the past, a couple of times, but I didn't use it; so this morning they handed me an envelope full of blank paper. So I am going to make a few informal comments about this program—which will be very brief but I hope of interest.

Before I make these comments, inasmuch as the talk is not written and edited, I should like to read a couple of lines that are used by radio stations following speeches after somebody talks on the program—if it is not one of their own talks. They say: "The views expressed by this commentator are his own and do not necessarily reflect the opinion of the sponsor or station to which you are listening."

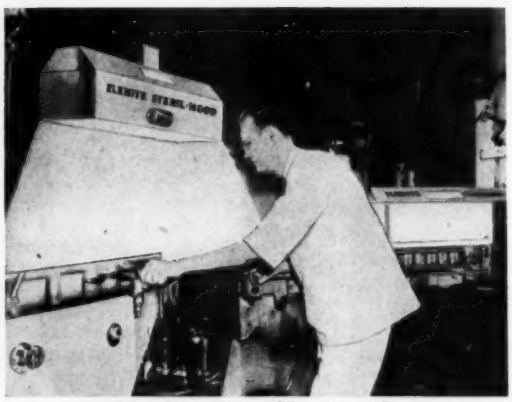
I read that to you because I am talking off the record, not as a representative of my company necessarily. I only speak as one of the deck-hands, and I only presume to speak at all on this subject because I have been more or less active in this program since the first ad appeared—in fact, for a year before the first ad appeared.

I'd like to reminisce for a second. A few of the advertising men and a few of the natural casings men knew a job of advertising could be done to give a better appreciation of natural casings. It was a lot of work, but we did work up a program. Some skeptics said, "You can't build a display of sausage. It isn't like a display of machinery or shoes." However, we made one and they said it was pretty good. We made a better one for the convention at the Drake.

We proceeded with the program, using Braunschweiger as our spearhead, and got $135,000 put up for it as a trial balloon.

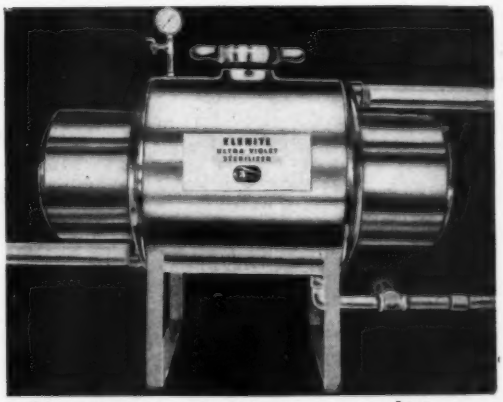
A year before, at the convention, Mr.

STOP SPOILAGE! With Controlled Ultra-Violet Kills Mold, Slime-Bacteria, Yeast



Elenite Steril-Hoods
(Patented)

- Assure commercial sterilization of meat products, wrappers, containers.
- Help eliminate spoilage in storage and packaging areas due to mold and slime.
- Protect flavor, bloom and prolong keeping qualities.
- Sterilize meat slicing, frank skinning and work tables, WITHOUT steam, hot water or chlorine.



Elenite U. V. Water Sterilizer
(Patents Pending)

99.97% Bacteria Destruction Proved. Purifies over 25,000 gals. water for ONLY A PENNY WITHOUT Heat, Chlorine, or other Chemicals

STERILIZED WATER WILL

- Help prevent spoilage, discoloration or odor caused by bacteria, mold, slime.
- Safeguard flavor, bloom, and prolong keeping qualities.
- Serve as final sanitary rinse of stuffers, grinders, tanks and other equipment WITHOUT use of steam, chlorine or other chemicals.

Several sizes. Ready now. Distributors everywhere. Write Dept. G Phone ALgonquin 4-4264

Successfully used by Pepsi-Cola (Evervess) and others throughout U.S.A. and in other countries

ELENITE COMPANY, 401 Lafayette St., New York 3, N. Y.

The Nation's Most Experienced Ultra-Violet Specialists in Food and Beverage Industries

G. F. Swift, in his address had said he intended to ask for $2,000,000 to do a job of advertising and sales promotion. Things were a little bit jittery in '38, so Mr. Swift said he would wait a year. Mr. Swift said this little $135,000 campaign in behalf of sausage in natural casings was the spark plug that set off the big campaign.

Those of you who are familiar with the Braunschweiger business, I think, will agree with me that Braunschweiger is now a year-in and year-out item throughout the country. I don't know how much money has been made out of Braunschweiger in the last eight years, but now it is as natural in the stores as cigarettes or anything else. Those of you in pork operations probably could quote some very favorable figures about the credits you have received from hog bungs used in producing Braunschweiger.

The program went along, and we got the $2,000,000 for each of three years; we got $1,500,000, back to $2,000,000 then $2,225,000 and $2,500,000. The program has been recognized by every advertising association and other organization in the country. There has been award after award for the best job of association advertising of the year. We received another one this week.

I am not going to talk about these charts, as I told you. But they are up there, and I hope you will look at them, read them and see some of the enormous figures. It has been a marvelous job: red ads in the weeklies every four weeks; ads, two every month in each of four women's books; the Fred Waring show.

Waring Show a Success

I don't know whether you folks realize what a buy we have in this Fred Waring show. But you can see the figures. The message is going into 7,700,000 homes every month.

We hear talk about a big spectacular night show. We say it is wrong. People at home after dinner want to be amused. We don't think it is the time to put over a nutrition story or product talk or profit and service talk. We hear sometimes about an afternoon program. But that also is not the best time to talk to the women. We reach them in the morning. We break in to all those soap operas. They do a good job, but we are doing a better one with the Fred Waring show and people are listening to it. We are going into homes with a 75-piece orchestra and a glee club, and they are in a good mood to listen to our message about MEAT and the household budget. That is the time to talk to them. It has been a success.

I think that after eight years any member of the meat packing industry who is not participating in it by now ought to say, "Well, it is a success. I want to get in."

A few months ago we got to thinking seriously about what the public thought about the meat industry. We have known for 50 years about what the public thinks. They blame us for everything—high prices, particularly. Elmo Roper made a survey, which has already been referred to. He received some of the most outlandish opinions I have ever heard. Some of the people thought we were taking 32c out of their dollar. Some of them thought we were only taking 16c.

PART OF MEAT'S TEAM

H. R. Davison, vice president of the American Meat Institute, with C. J. Abbott, president of the Nebraska Stock Growers Association.

Public Must Be Informed

The Institute organized a public relations committee, and then appointed a subcommittee of Mr. Tobin, Mr. Mayer and Fred Hoffman to meet with the fellows in the advertising business and try to dope out something to do about it. We dug up three or four campaigns that had been prepared during the last five or six years and which had always been turned down. It is a hard thing to do to talk about high prices without getting yourself in a jam. You have to consider the producer, government, labor, retailer and everybody else.

At one of these meetings we came out with this 7c a week for a family of four as meat packers' profits. The profit of the packing industry last year was $126,000,000 (whispered). That is all the money in the world, but that is only 85c apiece for each person in the United States.

I am not good at figures, but you can figure that out on the back of an envelope. We mulled that over for awhile and came to the conclusion that people don't think about the individual so much, but they think about the family. We broke it down to less than 7c a week for a family of four that the meat packing industry takes as a profit.

That sounded pretty good, and we got up the first ad. I think Draper or somebody kept track; after the ad had been changed 21 times, and rewritten, we quit counting, but anyway, we used all the ability of the Institute, agency and the people on these two committees in the first ad. We made a comparison on how trifling it was—less than the tax on a package of cigarettes, a shine, etc.

We dug up enough money—about $135,000. We managed, by scraping the bottom of the barrel, to run six of those ads. One of them ran last week. It is a little bit different in tempo—there is going to be more meat.

Public Relations Campaign

They called some more meetings to talk about public relations for next year. There were four campaigns prepared, and as usual very excellently prepared. We had another meeting with the subcommittee, Mr. Mayer, Mr. Tobin and Fred Hoffman. They were all so good that somebody remarked they would like to see all four of them used. We worked out an idea so that we thought we could merge a couple of them and use different ideas, which we did. We have now agreed on a plan of ten large ads, one a month, starting in January, in about 400 newspapers throughout the country, I think, all in towns of 50,000 and over and all towns where members are located. That campaign is going to cost more than $400,000.

We started a few months ago devoting half of our commercial time on the Waring show to this public relations job. We have made some spot surveys on the newspaper advertising and the radio in different parts of the country and the reception is good. We didn't expect to convince all the people in the country with six small ads that we are saints, but we have had a pretty good reception. We have found that lots of people read the ads and found a pretty high percentage that believed them. We have found a very small percentage who thought it was a lot of bunk. We feel pretty good about this thing.

Now you see the enormous job and the impressions we have put out to the 140,000,000 people in the United States—an ad every month in each of the leading weeklies, all of these ads in the women's magazines, the radio show, the newspapers. We use some 55 medical journals. We have done all that for less than 2c for each person in the United States.

Red Ad Cost Small

Take 195,000,000 red background ads there. To have sent them a penny postcard in one color, address them and send them out, would cost $6,600,000. On the other hand, it cost 6½c per family to address all this advertising to them. That is the same family that brings us $3.64 a year in profit.

We have some competition in this business, and you ought to know it. The flour millers, particularly, are very much concerned about their product—flour, which, eventually, is bread. They have raised $2,500,000, organized a bunch of high-pressure experts to direct the spending, research and the way to go at it.

The bakers have organized. They have $1,500,000 a year. There is $4,000,000

to be spent to increase the consumption of bread. That is what it amounts to in the long run.

The railroads are going to spend $3,500,000, the venetian blind makers have $200,000 to spend. California cling peaches have $1,000,000 to spend on peaches this year. The fishing institute has $500,000. Naturally our old friend, the dairy industry, has its $5,000,000, and don't forget that.

For the total meat consumed in the United States in one year, we are spending 1/100 of a cent per pound for advertising.

I am trying to get you worked up to a point to give us enough money to do this job.

We have agreed with the representatives of the committee on public relations, who, incidentally, are members of the board of directors of the Institute. They had a directors' meeting yesterday. The budget did not come up, since they believe October is a better time. I think perhaps it is to come up then.

Presidents of companies which I see sitting here have said. "No increased budget." All right, we can do it. From the amount of money—this $2,500,000—set up by the directors for advertising we will use about half of the sum allocated for the Waring show; that is about $450,000 for public relations messages. In addition, we expect to run these newspaper ads, which will cost about another $450,000—without an increase in the advertising budget.

FINDS INTERESTING READING

R. C. Allen, manager of the Famco Linker Div., Allen Gauge & Tool Co., Pittsburgh.

However, to do that we will have to drop one of these weekly magazines and two of these women's pages and some other activities.

After eight years, with the most successful association advertising program ever known—acknowledged so—instead of going forward, following all the things that Bill Specht and everybody said here this morning, we are going to pull in our horns on our nutrition story and our product stories and drop out of one of the weekly magazines and two of the women's books.

There are a couple of other books we ought to be using—the pulp books. But we don't have the money to do it. And now we have to drop one of the weeklies. We are already out in January. We can't wait even for board of directors We had to drop out, and we are going to have to drop out of one of the weekly magazines and two of the women's books this year in order to go ahead with this program.

You saw the per capita meat consumption go from 140 to 155 lbs., and we want to reach 700 per year for a family of four. The budgets of the packers for their own individual advertising is close to $30,000,000 this year. I would say $27,000,000 to $30,000,000 is what the individual packers are spending in support of their own brands, and we can't get $400,000 more out of them to do this job.

Now, I am speaking, as I say, as one of the deckhands. I don't know how my company feels about it. I say this—that every outfit in the meat business now should get into this program and participate.

The directors didn't get through yesterday with their meeting, I heard, and they are going to have another meeting in about a minute, and the budget is not going to be brought up. It is due in October. That is all right, but I think somebody at the directors' meeting should say, "Let's cut out the peanut business and tell these fellows what we want done." We shouldn't have to ask these people for this money. They ought to say, "Here is a job we want done; tell us what it will cost—then go ahead and do it."

STANcase *Stainless Steel* MEAT TRUCKS

New!

MODEL No. 18

SEAMLESS • SANITARY • LIFETIME WEAR

Specifications

Model No. 18

OUTSIDE DIMENSIONS
Length 47", Width 26", Overall Ht. 23"
INSIDE DIMENSIONS
Length 43½", Width 22¼", Depth 16".
CAPACITY—500 lbs. Weight—100 lbs.
Two, Stationary 4½" Casters in center.
Ball-bearing, Swivel Casters (4") at ends.
All Casters made of ATLASITE—Solid Tread, Special Rubber Composition.
Bearings are self-lubricating.

DEALER INQUIRIES INVITED

STANCASE MEAT TRUCKS introduce a NEW note in sanitary equipment for the meat industry and a NEW standard of quality which couples *life-time service* with maximum utility and efficiency.

These trucks are ruggedly constructed of 14 gauge Stainless Steel—*entirely seamless.* Careful engineering has provided them with generously rounded corners and a smooth-rolled rim to make them *models of sanitary* equipment which can be maintained sparklingly-clean with minimum labor. Rugged service-worthiness is assured by the high *quality-specifications* of component parts. This equipment is highly recommended to *buyers of quality* who understand the *economy of quality.* STANCASE MEAT TRUCKS are fully approved by health authorities.

ORDER FROM YOUR EQUIPMENT DEALER OR WRITE FOR FURTHER DETAILS.

The STANCASE MEAT TRUCK illustrated is Model No. 18
This and larger model were displayed at the A. M. I. Convention in our Booth No. 54

Manufactured by

THE STANDARD CASING CO., INC.

121 Spring Street, New York 12, N. Y.

Manufacturers and Distributors of Stainless Steel Stuffing and Trimming Tables; Meat Packers', Sausage Manufacturers', Locker Plant and Butchers' Machinery and Supplies

Chairman of Board Krey on Building Sounder Industry

THURSDAY AFTERNOON SESSION
September 4, 1947

THE meeting reconvened at 2:10 p.m. on September 4, 1947, with Wesley Hardenbergh, president of the American Meat Institute, presiding.

CHAIRMAN HARDENBERGH: Our next speaker is John F. Krey. He is the executive vice president of the Krey Packing Co. of St. Louis, one of the oldest companies in the business. Of course, as you all so well know, he is chairman of the board of the American Meat Institute.

Mr. Krey's father was a charter member of this organization. He was its president in 1914. Jack is a typical American businessman. He and Mrs. Krey have two children. In addition to his business, he has a keen interest in agriculture and he has hobbies of polo, horses and civic activities.

Jack sets the pace and is a pretty hard fellow to keep up with as many of you know. He believes that meat packers and livestock producers are partners and participates actively in agricultural activities throughout his entire business area. He knows many leaders in agriculture and is interested in the advancement of agriculture and is keenly interested also in the conservation of the soil.

He believes that all of us should give more time to the problems of agriculture. You know, too, that as chairman of the board of directors of the organization here, Jack has given very generously of his time. In fact, he has had to give up some of his home activities in order to devote more time to the interests of the American Meat Institute. For that, we are all grateful.

JOHN F. KREY: I have changed somewhat the title of my speech because of the crisis that is confronting us. Instead of the one that is listed, my new title is, "Problems Needing our Attention."

A major catastrophe is striking this country and a hungry world because of the drastic reduction in this year's corn production. Over one-half of all corn produced in the world is grown in the United States. Corn is the "backbone" of our agriculture. It is our major crop — whether measured by bushels, acres, dollar value, usefulness or versatility. That is why the failure of a corn crop is such a calamity—a double catastrophe when the world is so hungry and our people are bidding for more food than is available.

J. F. KREY

Excessive rains last spring with floods have been followed by devastating hot winds and dry weather. Damage from frost is yet to come and may be extremely heavy. Roughly, one-third to one-half of the crop is in danger of frost damage in 12 corn belt states if frosts occur at average dates. The next 15 to 20 days can bring double disaster should an early frost strike the Corn Belt.

Our wheat bins were scraped dry this spring to get food to starving masses abroad. Subnormal stocks, therefore, have been created. Now comes this disastrous failure of the corn crop.

As a fellow meat packer and chairman of the board of the American Meat Institute, I suggest that we must not stand idly by and do nothing about this problem that will have such a major impact on the farm industry, on our customers, on the nation and on our business.

Nine out of each ten bushels of corn are used as feed. Four out of each ten bushels are used for hogs. Cattle take over two bushels. When the supply of this basic fattening feed is cut one-third or more, as will be the case this year, meat production will drop. It will go down at a time when there is more need and demand than ever before and when farmers are getting extremely high prices for all the meat they can produce.

Meat supplies will drop in the year ahead, leaving consumers even more meat-hungry than now. Both farmers and meat packers will be blamed more than ever for high meat prices and reduced supplies of meat from retail meat stores.

Must Work With Farmer

We need to be teaming up with our farmer partners in this meat business, seeking ways to maintain livestock production as high as possible on a short corn ration. At stake is the most profitable livestock business farmers have ever enjoyed. You know how much our business suffers in disappointed customers and reduced earnings—or possible losses—when our volume goes down.

Too many people reach the quick conclusion that hogs cannot be produced without corn, yet Denmark produces lots of hogs and it certainly is not a corn country. The number of bred sows in the United States zone of Germany increased 25 per cent this year over last, and this must have been accomplished on a very limited supply of feed grains.

Early in August an Illinois farmer came into the National Stock Yards with all his well-bred Hampshire hogs. There were pigs of 125 lbs. on up to heavy sows. He had run out of corn. His crop was drying up. Corn was about $2.40 per bu. and futures were well over $2 per bushel. That farmer is out of the hog business. There are thousands of others that will take similar drastic action. It means: 1) loss to the farmer; 2) less meat for consumers for the next two or more years, and 3) less livestock for us to process. This problem needs action NOW.

All of us need to go home and urge farmers to make every bushel of corn produce the pork and beef that two bushels produced before. There are a number of ways in which the corn supply can be extended or other feeding practices adopted at least temporarily. Increased use of protein supplements, such as meat scraps and tankage, with other feeds not only makes the limited supply of feed grains go farther, but also adds much to the nutritive value of the feed ration. Dr. Kraybill and his staff have discovered, for example, that there is a very significant "animal pro-

(Continued on page 246)

CANNING EXECUTIVES COMBINE BUSINESS WITH DINNER

Members of the National Meat Canners Association held their annual dinner and business meeting on Wednesday evening in one of the large third floor dining rooms. The picture above shows the assembled officials just after serving began.

Some Industry Brokers and Their Friends

1. Pictured in the Henry E. Bender & Co. hospitality room, left to right: Sig Adler, Sig Adler & Co.; Lyle Lawson, Lawson Feed & Grain Co.; Henry E. Bender, Henry E. Bender & Co., brokers; B. H. Rowe, Proctor & Gamble Co. and Joe Adler, Sig Adler & Co., all of Chicago.

2. The Merrill Lynch, Pierce, Fenner & Beane hospitality quarters, featuring, left to right, seated: W. J. Foell, president Foell Packing Co., Chicago; S. A. McMurray and Lewis Brazelton, of Merrill Lynch, and R. E. Lange, Hately Bros. Co., Chicago. Standing: L. R. Morgan, jr., of Merrill Lynch; H. A. Morgenstern, sales manager of H. H. Meyer Packing Co., Cincinnati; J. G. Mercer, Merrill Lynch; M. S. Jerolman, secretary-treasurer Foell Packing Co.; A. Carlson, and Robert R. Weihe, of Merrill Lynch.

3. George Dunlap, Jr., Co. representatives welcomed guests at their Palmer house headquarters. Left to right, seated: Mrs. and Mr. J. F. Green, Mrs. Geo. Dunlap, jr., John Gavin, and Mrs. Ed O'Reilly. Standing: R. S. Fawcett of F. B. Cooper, New York City; Ed O'Reilly, George Dunlap, jr., Mike Brennan, Peter Golas, Superb Packing Co., Chicago.

4. The Gira-Walsh Co. hospitality room picture shows company representatives except as otherwise noted. Seated: Mrs. F. E. Walsh, and Mrs. Theodore Gira. Standing: R. G. Haynie, vice-president of Wilson & Co.; J. F. Dwyer, Frank Landy, and Jack Karp. Standing, second row: T. V. Gira; Paul H. Murray, president and O. W. Moon, plant superintendent, Murray Packing Co., Plainwell, Mich.; and Joseph Walsh.

5. William Eisenstadt, Chicago broker.

6. Seated: Al Byk, Berth. Levi & Co., Chicago; Mrs. Barnett Miller, Boston Sausage & Provisions Co., Boston, Mass.; Stanley E. Hess, Hess-Stephenson Co., Chicago, and Ray Stephenson and Ed Hess, of the same company. Standing: Barnett Miller, vice president, Boston Sausage & Provisions Co.; Joe Seely, vice president, Roberts & Oake, Inc., Chicago, and Edward E. Brice, vice president, Riverdale Products Co., Chicago, Ill.

7. John E. Staren Co. hospitality headquarters and representatives. Seated: John E. Staren and W. C. Westenberg. Standing: B. B. Trotter, John F. Staren, Helen A. Miller, W. W. Bailey, G. F. Peterson, and C. J. Barbosky.

8. Tom Walter, sales manager, U. S. Cold Storage Corp.; Jim White, associated with D. J. Gallagher; Roy Monson, of R. H. Monson Co., and R. E. Rezanka, vice president, Miller & Hart Inc. All are of Chicago.

9. Louis P. Salganik, treasurer, Consolidated Beef & Provision Co., Chicago; Marc Scheumann, general superintendent, E. Kahn's Sons Co., Cincinnati, O.; Miss Jean Hosmer, advertising manager, and W. Robertson, president, Keystone Brokerage Co., Chicago, Philadelphia office.

10. Visitors from Cuba, with American brokers. In front: Carlos M. Ayala, jr., flanked left and right by Miss Diana Ayala, and Mrs. Carlos M. Ayala. The men, left to right: Carlos M. Alaya, sr., Havana, Cuba; J. K. McKenerick, Chicago broker; James Siegel, of William H. Oldach, broker, Philadelphia, Pa.

11. Seated: George Gillespie, director, meat division of the National Association of Retail Grocers; John Krey Stephens, general superintendent, Krey Packing Co., St. Louis; George Sunderland, and (standing, left) Harold L. De Ford, Sunderland & DeFord, Chicago brokers; E. V. Theobald, general manager, Abraham Bros. Packing Co., Memphis, Tenn., and J. E. Groneck, provisions manager, Krey Packing Co.

12. R. M. Dall, canned meat manager, J. E. Decker & Sons, Mason City, Ia.; L. E. Griffin, P. G. Gray Co., Boston, Mass., and R. F. Melchior, provisions manager, J. E. Decker & Sons.

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CONVENTION FLASHES

The Hunter Packing Co., E. St. Louis, Ill., expects to have its solvent rendering unit in operation by the first of the year, **Frank A. Hunter, jr.**, president, said at the AMI meeting.

D. J. Holman, president, Fort Worth Dresed Beef Co., Ft. Worth, Texas, states his new plant will celebrate its opening with a fiesta.

CONVENTION ISSUE

KREY—Session 5

(Continued from page 243.)

tein factor" in meat scraps in feeding not only meat animals but also poultry.

Another possibility of extending the limited corn supply for the year ahead is to encourage the feeding of other grains such as oats, wheat, barley and grain sorghums which will be available early next year. In 1943, for example, we fed 417,000,000 bu. of wheat to livestock—about one-third the size of our bumper wheat crop this year.

While desperate needs abroad should come first, perhaps some consideration should be given to utilizing a modest portion of our wheat supply this year as livestock feed. Pastures also can be used in many areas the year around. A good pasture can save up to 10 to 20 per cent of the necessary grains and concentrates. Experiments show a single acre of hog pasture can save 1,000 lbs. of corn and 500 lbs. of protein feed or its equivalent. Rye will supply abundant late fall pasture, if sown in September, at the rate of two bushels per acre. In fact, the same rye pasture may also be used for early grazing in the spring.

The August 1 government crop report indicates a hay crop of 103,000,000 tons, which is 2 per cent larger than last year, and 12 per cent above the prewar production. Every effort should be made to utilize this hay and other rough feeds available around the farm to greater advantage in livestock feeding.

In view of the promising possibilities of extending the feed supply during this emergency, farmers should be urged to keep their breeding stock. In my opinion, they should be urged even to plan on some increase and begin immediately to make plans for obtaining the necessary assortment of feed rations to carry through the coming year.

Profits a Big Factor

In addressing you last year, I spoke of the need for efficient livestock production by farmers as a long-time program with which we should be deeply concerned. Now a corn crop failure has made the problem an acute emergency. The examples I gave one year ago are largely the answer.

Efficient production and feeding on farms largely control the amount of profits farmers make from livestock. Profits influence the number of livestock produced.

There are tremendous differences in the cost of producing beef, lamb and pork. Capable farmers produce 100 lbs. of pork for market with 250 lbs. of grain feed while others use two or three times as much. Nebraska tests prove that "a pound of tankage saves or replaces four pounds of corn" and Purdue university has found that even a little item like one cent's worth of salt "brought about a saving of $3.85 in feed costs per 100 lbs. of gain . . ."

Only 56 out of every 100 pigs born reach the market. Cattle feeders have their problems too. The University of Illinois reports that "the seven-year (1938–45) average death loss per head sold amounted to $1.10 for calves, 58c for yearlings and 45c for heavy cattle."

Missouri land that will produce less than 30 bu. of corn can be made to supply pasture producing as much beef as can be had from 87 bu. of corn. It doubles output and conserves soil.

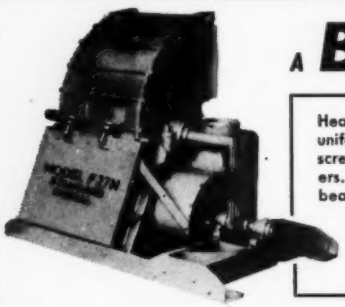
It is possible to make one bushel of corn do the job of two on thousands upon thousands of farms. Meat production can be maintained, regardless of the grain shortages. But it will take prompt and vigorous action.

It is an emergency, as well as a long-time program, which will be fully supported by the U. S. Department of Agriculture and every agricultural college, experiment station and extension service across this country. It is a vast program of service to both farmers and consumers.

Alternative Is Less Meat

The alternative is to stand idly by and see the meat supplies of the nation decline sharply after this year. We will have less meat to process, less labor will be employed and people will have less meat to eat.

"Surplus Food? There's No Such Animal." Perhaps you read the article in the *Saturday Evening Post* of July 19 by H. E. Babcock, and I am sure you will recall his speech before the convention two years ago. Babcock is a



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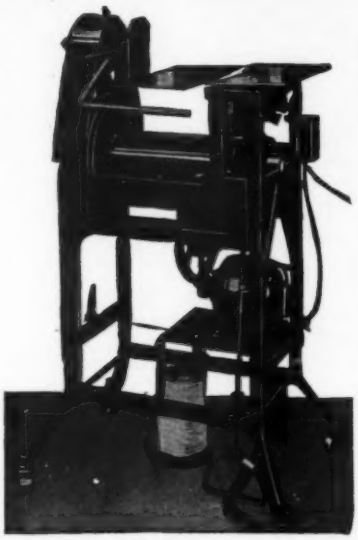

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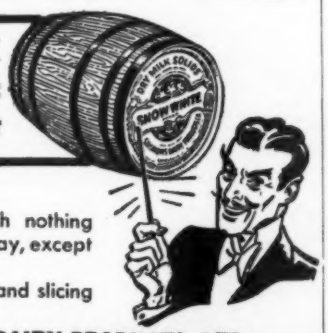

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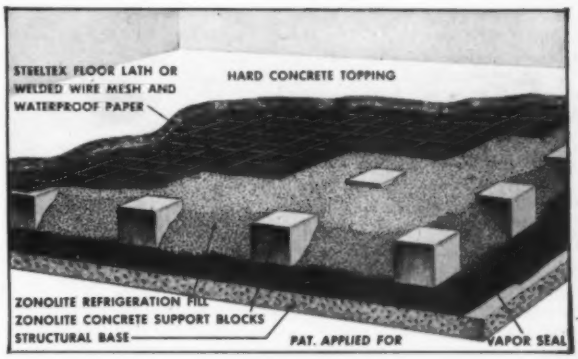

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If that day ever comes again, it will be a tragic admission of failure. The government again will be reducing the food supply when many of our people—not those in foreign lands—may be hungry and suffering from malnutrition.

Meat is the center of the American square meal. When meat is provided for more people we will have a more healthy and vigorous population and there need be no further worry about agricultural surpluses when the inevitable recession comes after this boom period.

Secretary of Agriculture Clinton P. Anderson, at the opening of the hearings of the House committee on agriculture for a long-range agricultural policy and program, said: "I want to show you the opportunity we have now, at long last, to establish and maintain a balance between consumption and the sound capacity output of our agricultural plant. This is an opportunity not only to serve the general welfare but also, and not incidentally, to serve the best interests of United States farm people throughout our entire land."

PACKERS, BROKERS AND SUPPLIERS IN A HAPPY HUDDLE

This group was snapped in the hospitality room of Whitting & Austin, Chicago brokerage firm. Front, left to right: F. M. Leganza, purchasing agent, Agar Packing & Provision Corp., Chicago; Gordon B. Austin, Whitting & Austin; Fred Gunkel, vice president, Oscar Mayer & Co., Madison, Wis.; and Geo. Whitting, jr. Rear: J. C. Derby, Armour and Company; James Heffernan of Agar; E. R. Galloway, Ft. Wayne Corrugated Paper Co.; H. W. Noland, Scherer Freight Lines, and Geo. W. Whitting, Whitting & Austin.

He went on to say, ". . . people want about 40 lbs. more meat per capita than they were getting between 1937 and 1941.

". . . We cannot market only as much agricultural production as we have now but can actually expand. We can do it profitably and with progressive improvement of our natural resources.

"The second reason we have no practical alternative to a policy of organized plenty is that when we produce what

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EAST AND WEST MEETING

LEFT: Henry R. Streckert (right), vice president of H. C. Bohack Co., Inc., Brooklyn, N.Y. poses with William G. Joyce and William G. Joyce, jr., Boston brokers. RIGHT: H. J. Arland (center) of Eldridge Packing Co., Kansas City, Kans., stands between Jos. R. Walsh (left) and James Dwyen, both of Gira-Walsh Co., Chicago brokerage company.

our people really want we will emphasize livestock farming, which is an aid to soil conservation and future productivity.

"We know, for example, that it takes about seven times as much grain to supply a person a diet of livestock products as to supply him a grain diet.

". . . with present yields, we would not have enough cropland to support our present population if all of us ate the same high-grade diet that our high-income families eat. . . . It takes no imagination to see the possibilities of eliminating the old problem of surpluses if we have the means to eat what we really want."

"It is plain that the people want more and better food and more of other commodities than we have ever produced."

The Secretary of Agriculture also quotes Babcock in further emphasizing to the House of Representatives agricultural committee that more livestock is the road to: 1) soil conservation; 2) better nutrition; 3) elimination of agricultural surpluses, and 4) a more prosperous agriculture. This is a type of agricultural program to which we can lend the full support of the meat packing industry.

Another acute major problem is the failure of consumers to understand why meat prices are so high compared to prewar. The members of the International Stewards and Caterers Association meeting in Detroit early last month were bold enough to call the rise in meat prices "sheer inflation without justification." Such statements cannot be supported but they reflect a trend of thinking which must be answered.

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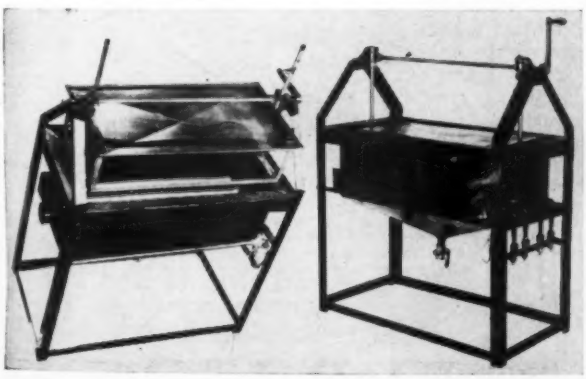

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We owe it to our customers and again we find that we have a common problem with our farmer friends.

Since the President of the United States decontrolled meat there have been substantial increases in prices of meats and other products. This, as we know, is the result of an unprecedented demand resulting from high incomes and heavy exports. However, most people who compare present meat prices with the prices which prevailed a year or so ago fail to take into account two facts.

One is that the subsidy, which was being paid out of the public treasury during the latter years of the price control period, tended to obscure the real price of meat. The second fact is that most meat was available only in the black market and the black market prices were substantially higher than the OPA ceilings.

When the foregoing factors are taken into account, and the amount of the subsidy and the black market charge added to the price which prevailed last year, it will be found that current meat prices are little, if any, above the final total price paid under OPA.

As a matter of fact, figures of the Bureau of Labor Statistics show that the amount of meat which can be purchased by the average industrial worker with his weekly wage is just as large now as it was in 1939.

Farmers do not set the price on their livestock. Neither do meat packers. Consumers, in the final analysis, set the price by bidding against each other for the available meat. Farmers would produce more meat except for the fact that it has been considered important to ship huge quantities of grain out of this country to keep people from starving and to help stabilize the world political situation. Food is being used to help "Win the Peace."

THE JOKE MUST BE GOOD

Bill Gilliam of the AMI office in Washington, D. C., with Louis E. Kahn, vice president of E. Kahn's Sons Co., Cincinnati, O.

We know such facts as these. Farmers are aware of these circumstances. How well are we cooperating with the Institute in seeing that this information gets before the general public? Until we see that such facts are better understood, we, along with the farmers, can expect to stand condemned in the eyes of the consumers who resent paying 75c per lb. for bacon and near $1 per lb. for the better beef steaks.

As chairman of the board, I have seen the Institute adjust quickly to the new problems with which our industry has been confronted during these rapid postwar years of developments. I am amazed at the range of services available to members.

A recent check of the mail received by the Institute disclosed that communications requiring service action by staff members total well over 1,400 a month. The majority of these requests for information, or for service, or for some other form of assistance, are from member companies. This did not include telephone calls from member companies, the number of which is very large.

I would strongly urge any of you who have a problem on which you would like help to bring it to the Institute and see whether the Institute cannot give you the help you need. It has done so in many cases with which I am familiar and can do so, I am sure, in many more, and, if any of you have any suggestions as to what the Institute might do in the way of service which it is not now offering, your suggestions will be appreciated.

The action by Congress in assessing the costs of federal meat inspection against companies having federal inspection is an unfortunate recent development that is distinctly unfair. The federal meat inspection act was passed

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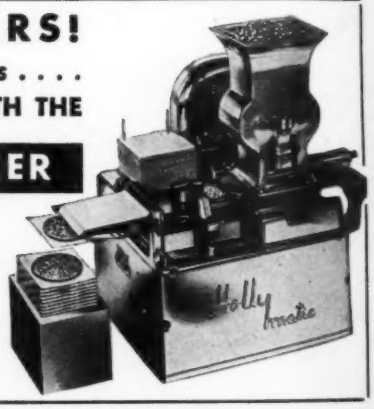

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to protect the public health and the cost of administering it is properly a public expenditure. For more than 40 years the costs of federal meat inspection, except for overtime charges incurred at the request of the federally inspected operator, were paid by the federal government.

Protest by Entire Industry

The change in this practice came about despite the vigorous and bitter protest of all segments of the industry, including not only meat packers but livestock producers, retailers and many others. Veterinarians also were opposed to the change.

I am hopeful that when Congress reassembles it will be possible to reestablish the traditional and sound method of paying the charges for federal meat inspection. I think we all should make most vigorous efforts in that direction and I believe that each of us should get our congressmen and senators to visit our plants so that they can see for themselves how important it is that federal meat inspection be properly maintained and properly financed.

Last year, I urged that we individually and collectively spend more money and top executive talent at the point where it will produce the greatest returns—that is out in the country with farmers where the products we process originate. Our welfare is closely linked with that of the farmers. We need to team up more effectively to produce and process the food for the nation.

RELAXED TRIO FROM CHICAGO

Frank Murphy (center), production manager of Roberts & Oake in Chicago, pauses for a little relaxation with Lacy J. Lee (left) and Claxton Lee, of Lacy Lee Brothers, Chicago brokerage company.

The following broad suggestions embody those given last year. They are not a detailed program but they are a basis for formulating plans of action for our individual companies as well as for the Institute.

1. Volume is a basic problem of the livestock industry. It must be solved on the farms and ranches. Our contribution to this solution must be made by working through farmers.

2. Livestock profits for farmers must be kept high if large volumes of livestock are produced for us to process and market. That means more efficient production and feeding and, of course, more efficient processing and marketing.

3. Efficient production and feeding of livestock is a long-time educational program.

4. Each packer and all local packer organizations should assume special responsibility for the development of the farming areas from which they draw livestock.

5. Established programs of agricultural colleges, extension services and vocational agricultural instruction should be used whenever practical, rather than attempting to create new programs. In other words, let us harmonize our efforts with these agencies and use them to further the proven livestock practices.

6. An emergency exists as a result of the corn crop failure. Let's go home and

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In many packing plants with corrosive atmospheres GRID Unit Heaters have been operating continuously for over 17 years without maintenance expense. It's the material that makes the difference. GRID is the only unit heater free from electrolysis—made to last as long as the pipe furnishing steam to it.

Ask for complete details, capacity tables, engineering data—and see how you can have maintenance-free heating equipment in your packing plant.

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get quick action designed to stem the tide of livestock liquidation that, as the USDA says, will ". . . lower the output next year."

7. Better relations with farmers are needed. Become better acquainted with your livestock producer friends. Don't leave the responsibility and pleasure of contacting livestock producers exclusively to your livestock buyers or commission agents.

I observe a number of livestock producers and feeders in the meeting today. We are pleased to have them here. I say to you meat packers that you should invite your livestock producer friends to visit you at your plants and show them around your places. They will be interested in knowing how the processing and distribution of the products of our industry are performed. Furthermore, go to see them and attend their meetings, whenever possible, and participate in the discussion of mutual problems.

8. Better relations with consumers are urgently needed. We should use every opportunity to tell the public why meat prices are high—that neither we nor the farmers set the price of meat. They need to know that high-cost meat is one result of sharing our food with a hungry world.

9. Our meat educational program should be expanded. Mr. Specht told us this morning about tomorrow's customers and members of the Institute's advertising committee told us about the effectiveness of the Institute's advertising program which has enlarged the public's knowledge of the nutritional facts about meat and has enhanced the demand for meat. Further dissemination of these facts by the Institute, through the medium of magazines, newspapers and radio, can be achieved, in addition to individual packer advertising and merchandising programs.

These are big jobs. But! Our industry is big—third largest in output among all of the manufacturing industries. Nearly one-third of the consumer's food budget is spent for meat and almost one-third of the farmers' cash income comes from livestock.

It largely depends upon the efficiency of our industry and upon farmers' production and soil conservation practices whether the people continue to eat well and have the food they like and need for good nutrition. Inefficiency means our people must drift downward to lower living standards and diets of cereals, beans and potatoes. We have a big job to do—out on the farms—teaming up with our farmer friends for greater efficiency. It is a challenge to us! Will we accept it?

Mr. John F. Krey assumed the Chair.

CHAIRMAN KREY: Our next speaker on the program this afternoon is Mr. Frank C. Raney, chairman of the department of purchasing at John Morrell & Co., and member of the Institute's purchasing committee, who has spent his 38 years of business experience with six companies. Thirty-six of these years have been exclusively in the purchasing field. For six years he was with the R. Herschel Manufacturing Co., Peoria, Ill.; for three years with the D. M. Sechler Implement Manufacturing Co., Moline, Ill.; for 15 years with the Dain Manufacturing Co., Ottumwa, Ia., and for the last 16 years Mr. Raney has been with John Morrell & Co., Ottumwa.

INSTITUTE PLAN FOR GROUP PURCHASING IS DESCRIBED BY RANEY

FRANK C. RANEY: The new purchasing program of the American Meat Institute which has been formulated and is now being put into action should be of more than passing interest to all of us. In the time allotted for this talk, I would like to present five points and to expand them as fully as the time will allow.

F. C. RANEY

No. 1. The purchasing department has consummated definite arrangements with various suppliers on over 250 items. You have from time

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to time received little packets of 3x5 cards, some white, some blue. These cards contain all necessary information concerning the items that we can furnish. They give you the source of supply, a description of the item and the price in plain figures. This last is a change from our old method of using code words which were often forgotten and which made use of the cards difficult. The white cards cover items purchased through the Institute Equipment & Supply Co.

It is to the members' advantage to place their orders through the Institute, even when they have the same prices from other sources. We need the cooperation of all members in order to justify the representations which we have made to our suppliers.

We hope that you will not merely check these cards when they come and when using the sources thereon attempt to order directly from these companies. It is the hope and belief of the committee that you use the department's arrangements even though somebody else has met the offer listed in our arrangement. Obviously, their price was quoted only to meet our arrangement. It was through the efforts of the committee that these suppliers were selected and sold on the desirability of dealing with you on your requirements. Even if equal quotations are received from others, your loyalty should be with the Institute arrangements because of the future benefits you will derive.

FAMILIAR CONVENTION FIGURE

Charles E. Herrick, one of the meat industry's grand old men and a past president of the American Meat Institute.

It is only through your contributions to volume purchase that such prices are made available to everyone in the Institute membership. The more you cooperate in using the purchasing department, the more benefits you will receive from purchasing through the Institute.

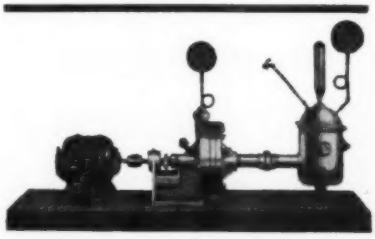
I would like to mention a few examples of some of the items that we have purchasing arrangements on: Rubber Boots—Allied Rubber Co.; Knives—Russell-Harrington Cutlery Co.; Aprons—J. F. Carter Co.; Tires—Denman Tire & Rubber Co.; Clothing—Moeller & Son, Wirk Garment Co., Siegfried Weinsaft Co. and Topps Mfg. Co.; Wire Baskets—United Steel & Wire Co.; Stockinettes—Dyersburg Cotton Products, Inc., Allied Mfg. Co. and Cincinnati Cotton Products Co.; Spices—Chili Products Corporation, C. B. Gentry Co., Wm. J. Stange Co. and Basic Vegetable Products, Inc.

You will note that a number of these items have several sources of supply indicated. This gives you an opportunity to choose the supplier who can give you the best deliveries and who is closest.

All of the items which we have purchasing arrangements on have been passed upon by the purchasing committee of the American Meat Institute. In many cases, samples have been given practical tests by the committee members concerned. On some items, this is, of course, unnecessary.

We feel that it would be worth the time for you to know who the members of your purchasing committee are. This committee consists of 14 members, as follows: J. S. Armstrong, Cudahy Packing Co.; R. A. Bateman, Geo. A. Hormel & Co.; R. H. Fried, Fried & Reineman Packing Co.; F. W. Hagerman,

(Continued on page 261.)



This simple RETURNAL outfit collects steam condensed in cooker jackets and returns it directly to the boiler at high temperature and pressure and without any flash steam loss. It reduces boiler load by 25% or more and usually saves enough in fuel, water and softening materials to pay back its cost every year.

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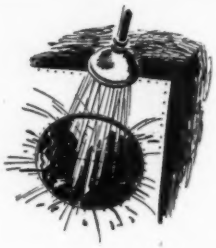
THEY PASS HURRICANE TESTS!



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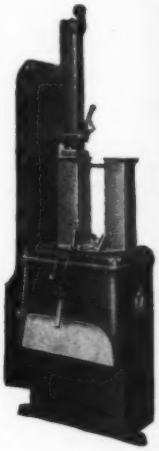
FATS—PORK—RAW and BOILED BEEF—LAMB—VEAL—CHICKEN and ALL KINDS of FRUITS, VEGETABLES, Etc.



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Dinner Session

THURSDAY EVENING

AN overflow crowd of nearly 2,000 persons flocked to the Stevens hotel on Thursday evening, September 4, for the annual dinner of the American Meat Institute, held in the grand ballroom at 7 p.m. Around 100 leaders of the packing industry and notables from many other business and professional fields were seated at the speakers' table (see page 258), including General of the Army Dwight D. Eisenhower, chief of staff, who was the honor guest and principal speaker.

When all the guests were seated, John F. Krey, chairman of the board of the Institute, led the march of dignitaries into the hall. When all were in place, the National Anthem was played and the service of dinner began. After dining, the guests heard several semi-classical selections sung by Miss Audrey Paul, contralto, winner of the Chicagoland Music Festival contest. This was followed by a short talk by Wesley Hardenbergh, president of the Institute (see page 257), and an address by General Eisenhower.

Highspot of the evening was the presentation of "The New America," a series of beautiful three-dimensional color slides prepared by *Life* magazine. Other features included the parade of desserts through the aisles of the dining rooms, led by the ice statue of a steer (shown above) and music by Lou Diamond's orchestra.

Forty-Second Annual Dinner of the American Meat Institute

Held at the Stevens Hotel, Chicago, September 4, 1947. Address by General of the Army Dwight D. Eisenhower

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Hardenbergh Urges Industry-wide Teamwork in Address Before AMI Annual Dinner

THE banquet session convened at 9:30 p.m. in the grand ballroom of the Stevens hotel, on September 4, 1947, with J. F. Krey, chairman of the board of the American Meat Institute, presiding. AMI President Wesley Hardenbergh gave the following address:

WESLEY HARDENBERGH: I hope you will not consider it presumptuous of me to talk to you briefly about your business. I want to do this because I feel that more than ever before American business should face its problems on an organized basis. The war and the decade immediately preceding it set into motion, or accelerated, developments which make it imperative that business be alert and aggressive on an industry-wide basis and, most important of all, united and steadfast.

Two matters of the greatest importance face American business today. One is research to keep industries abreast of progress. The other is the necessity of being better understood and better appreciated.

The growing complexity of business intensifies the need for both increased research and for improved public relations.

A few decades ago, most of our industries were household or neighborhood industries. Take the village blacksmith shop for an example. Its operations were relatively simple. The whole plant was under one roof—"under a spreading chestnut tree," in the words of the poet—and everybody could see and hear and smell and understand what was going on. In those days, the blacksmith didn't need to think very much about research.

But that is not so now in these days of specialization in manufacture, of electronics and atomic power and of laboratory dreams coming true.

Today, research is the very lifeblood of business, the regulator of profits and the determiner of success.

On the public relations side, it probably is trite to say that the public of today does not properly appreciate the great contributions which business and industry have made to America and to the world. Yet it wasn't so many decades ago that business and businessmen were looked up to and respected by a very large percentage of the population. That this is not true today is due largely to two facts: first, business, handicapped by its complexities, and sometimes by the reticence of its managers, has not done a good enough job in making its virtues known; and second, and more important, what at times seems like a planned program and technique of vilification and misrepresentation of business and industry has been employed most effectively not only by radicals but also by various self-seeking groups and even at times by representatives of government.

This development, thriving because of ignorance of facts, has become far more important to the individual member of industry than any competitive development within the industry.

Teamwork Necessary

The Hitlerian technique of false charges and of vilification cannot be met by a divided industry. In fact, a divided industry only increases individual vulnerability.

All of this, it seems to me, points to the need for skillful teamwork and cooperative action on the part of business and businessmen.

Now, just what does this mean to many of us here in this room?

It points clearly, in my opinion, to the need for strong trade associations. It points, further, to the need of national associations, representing an *entire* industry.

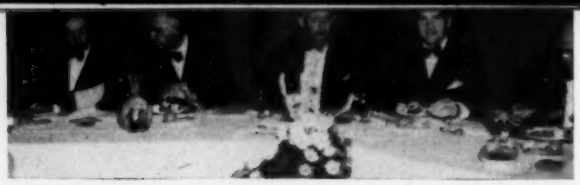
We hear a lot these days about small business. Trade associations have known about small business and small businessmen for many years. No agency has done more than they have, or nearly as much, to build up our industries and make them efficient, and especially to extend help to the smaller elements of the business, invariably with the assistance, either direct or indirect, of the larger elements of the business, and often at their expense.

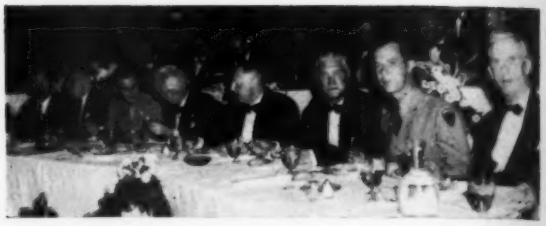
Let us look for a moment at the American Meat Institute in relation to the American meat packing industry and the needs of that industry. To progress, an industry must be understood and respected. It must keep abreast of progress. It must be an expanding rather than a contracting industry.

The American Meat Institute has a public relations program which is making our industry better understood. Ours is an industry which stands in a most vulnerable spot between producer and consumer and although our industry serves both producer and consumer effectively and well—at an unbelievably small profit that averages only 7c per week for a family of four—the story of that efficiency and that service is not always, or often, self-apparent.

It must be told. The American Meat Institute is trying to do that job, means to do it better than ever in the future and in doing it is helping the entire industry.

Some of you may feel that public relations are all right for the bigger companies in the industry but that they aren't of much concern to you. If you





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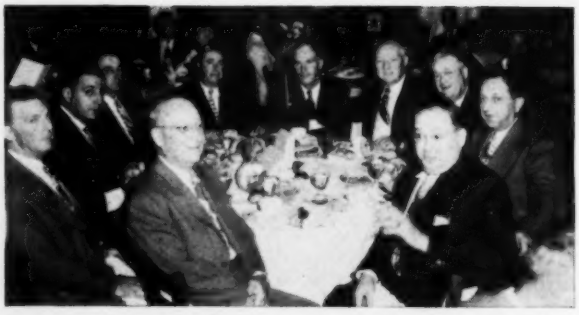
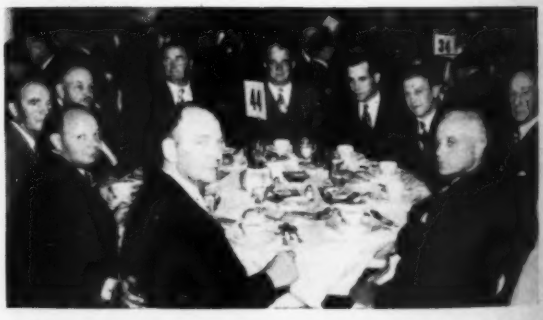
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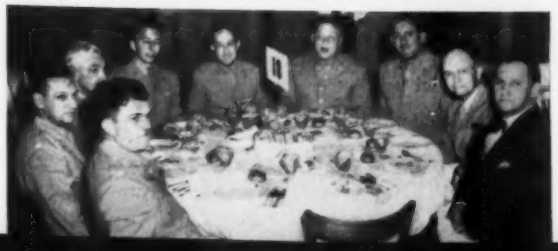
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think that way, I would like to say in all sincerity and in all respect that you are making a big mistake. The fact is that if any industry has poor public relations, no individual company in it can escape the consequences.

Now, keeping abreast of progress involves research. You know the story on that in our own industry. You know that more than 100 companies in this industry, including most of the largest and many of the small companies, have made possible, through the liberal contribution of funds, the American Meat Institute Foundation building now being constructed on the campus of the University of Chicago to house the Institute's research activities.

It may seem to some of you, of course, that such things as autoclaves and penetrometers and other equipment of the laboratory do not have much connection with the business of buying livestock and dressing and selling meat, but they may; and research findings are quite likely to make the difference between successful and unsuccessful operation of our industry in the future.

And please bear in mind that, along with many smaller companies which have no research programs of their own, our larger companies with extensive research programs are supporting the Institute Foundation program liberally, and the results of that research, made possible to a very large degree by the contributions of the larger units of the industry, will be of general industry benefit, not only to the large but to the small as well.

Now, as for the necessity of an expanding business, we need look back only a few years. In the 20 years following 1919 our population increased by some 20 per cent, while meat production stood still and even trended downward.

Is a shrinking market a desirable market? Is it one that is sound and profitable? Would a shrinking business be the kind of a business that you would like to hand down to your sons and those who follow you?

I don't think you will need to ponder very long the answers to those questions. There can be but one answer and that answer the industry already has given. It is "No," a loud and resounding "No."

BANQUET HONOR GUEST

General of the Army Dwight D. Eisenhower, chief of staff, was guest of honor and featured speaker at the annual banquet held on September 4 in the grand ballroom of the Stevens hotel. General Eisenhower is shown here at the speakers' rostrum. The tremendous ovation which greeted his appearance lasted for several minutes.

Seven years ago, the leaders of our industry—again a few more than a hundred of our member companies—supplied funds for a meat educational program, the merits and accomplishments of which are known to all in the industry. Through the unselfish support of these companies, more than $15,000,000 has been spent to promote the nutritional value of meat and to show consumers how to buy and use meat economically and easily. Not this brand of meat or that brand of meat or any brand of meat, but *your* meat, *all* meat.

Everybody in the industry has benefited and, if I may be forgiven for my lack of modesty, I think every meat packer in the country owes a big debt of gratitude to the American Meat Institute and to the packers who have made the meat educational program possible. If any of you don't see it that way, let me ask you how you would like to have seen that amount of money spent in ways that would have restricted rather than expanded the market for your products?

I hope some of the things I am saying here tonight will not be misunderstood. I naturally think that every packer worthy of the name should be a member of the American Meat Institute and many of them are. I want to make it plain, however, that I have no quarrel with any packer who wants to belong to other associations in the meat industry. That is his right and privilege.

But I do submit to you in all sincerity that a disservice is being done in many directions if you permit prejudice or anything else to blind you to these facts:

First, every businessman owes it to himself to help promote the overall interests of the industry of which he is a part.

Second, there are important jobs which are difficult to accomplish for an industry unless that industry is united, and many jobs which can be accomplished *only* by a national association representing the entire industry.

Third, competition always has been keen in our industry and undoubtedly always will be. The American Meat Institute can help you competitively by helping you to become more efficient. The more competitive the business gets, the more you will need the Institute.

So, let us take a leaf from the lesson of the great allied victory whose Commander-in-Chief honors us by his presence here tonight. Let us become a more united industry than we have ever been before. Let us continue to compete bitterly, fiercely in buying livestock and in selling meat, but let us work together—all of us—faithfully, aggressively, and loyally to make ours a better and more efficient industry and to increase our service to the public, and through such increased service gain the reward which is sure to come to those who serve faithfully and well.

BANQUET DESSERT PARADE

Led by the figure of a beef animal carved in ice, Stevens hotel waiters parade through the grand ballroom with the dessert course. Steers of wax surmounted ice cream cakes.

RANEY on Purchasing

(Continued from page 253)

Tobin Packing Co., Inc.; F. A. Hanna, Wilson & Co., Inc.; J. J. Hewitt, Agar Packing & Provision Corp.; D. L. Hoff, Rath Packing Co.; E. L. Neubauer, Field Packing Co.; Starr Parker, H. H. Meyer Packing Co; P. J. Schwietering, Cudahy Brothers Co.; L. A. Shepherd, Swift & Company; H. M. Shulman, Hammond Standish & Co., and R. H. Skadow, Oscar Mayer & Co. And at the present time, your speaker is acting as chairman of the committee.

Here I want to pay the committee's respects to the people who carry the load in the purchasing department of the Institute: Arthur G. Pearson, director of purchases; Miss Frances Anderson, secretary; Joseph Schneider, buyer, and Miss Agnes Olsem, record clerk. If it were not for this personnel, I am afraid that your committee would resign in a body.

No. 2. One of our functions is to locate items that are not listed on the cards in your possession. As you all know, Chicago is a great merchandise center and this places tremendous resources at the department's finger tips. The more that you call upon us for additional sources of supply, the greater becomes our catalog of information. The more opportunities you give us to find something for you, the more valuable we become to the membership as a whole.

No. 3. We are constantly checking new items to determine their value to our members. The committee, as well as the department office personnel, is on the lookout for new materials and equipment that may be of interest and value to our industry. Samples are procured and practical tests made so that we may be certain that when we offer such items to you, they will prove satisfactory in actual usage.

No. 4. We act as a clearing house for new items. The various manufacturers seek to reach the industry directly through the purchasing department and in so doing we benefit because of the less expensive method of distribution.

No. 5. We believe that this program is of value to you because it gives you many additional sources of information on supplies and equipment used in the conduct of your business. From the other side of the table, it gives the manufacturers a direct channel to disseminate information to our industry as a whole, the result being a low cost method of distribution which means more value to you for less money outlay.

In conclusion, we want you to feel that this department is truly interested in being of service to you. It is yours to be used by you. Your use of the department increases the volume of business handled. This increases the ability of the department to give additional service. It has been a pleasure to have this opportunity to tell you something of the purchasing department's setup and activities as we feel that we have something to offer you, of which some of you have not been taking full advantage.

CHAIRMAN KREY: It is really a pleasure to introduce the next speaker, who is from my home state. Dr. Albrecht has made several most interesting talks and his subject is one that is and always should be very close to our hearts.

Dr. Albrecht is chairman of the department of soils of the University of Missouri. He is an expert on soils and soil fertility. For many years he has specialized in the relationship of soil fertility to the problem of human nutrition. He has been a member of the staff of the University of Missouri since 1916 and holds four degrees from the University of Illinois. He has a thorough familiarity with soil problems in the midwest Corn Belt, having been born, bred and educated in that area. This interest he has retained throughout his career, both in teaching and in the practical application of his findings.

Dr. Albrecht's studies in soil research have dealt with the functional viewpoint, the soil's service in nourishing microbes, plants, animals and all life. This is the basis for his broad interpretation of soil and its broader implications with regard to livestock control. He is the author of many scientific and popular articles on soils and soil fertility. Dr. Albrecht.

NEW AMI OFFICERS

John F. Krey, vice president of Krey Packing Co., St. Louis, Mo., was re-elected chairman of the Board of the American Meat Institute. **Wesley Hardenbergh**, Chicago, was again named president.

All six vice chairmen were re-elected: **F. W. Hoffman**, the Cudahy Packing Co., Chicago; **Jay C. Hormel**, Geo. A. Hormel & Co., Austin, Minn.; **Chester G. Newcomb**, Cleveland Provision Co., Cleveland, O.; **W. F. Schluderberg**, the Wm. Schluderberg-T. J. Kurdle Co., Baltimore, Md.; **D. R. Howland**, Miller & Hart, Chicago, and **W. R. Sinclair**, Kingan & Co., Indianapolis, Ind.

H. Harold Meyer, the H. H. Meyer Packing Co., Cincinnati, O., was re-elected secretary-treasurer. **F. H. Hunter, jr.**, Hunter Packing Co., St. Louis, was added to the executive committee.

Cornelius Noble of Noble's Independent Meat Co., Madera, Calif., and **Ernest Holmes** of John R. Daily Co., Missoula, Mont., were named to fill vacancies on the board of directors, and **Ernest W. Fallentine** of American Packing & Prov. Co., Ogden, U., was named to fill the unexpired term of **G. W. Birrell.**

DR. ALBRECHT TELLS HOW LIVESTOCK AND SOILS ARE RELATED

DR. WILLIAM A. ALBRECHT: Livestock is the source of many of our best food proteins. These are the result of complex life processes in the soil, in the microbes, in the plants and in the animals. All these add up to good food, provided all the essential raw materials are supplied at the starting point, which is the soil. Livestock and soil work together with the soil in control. As a phase of this natural performance of manufacturing proteins, we may well study first the soils under their general fertility pattern as this is suggestive in solving the problem of giving us plenty of protein in the form of meat.

DR. ALBRECHT

The provision of protein as food is not only a struggle for us humans, but is one for animals and for plants as well. Reproduction—the very purpose of existence—depends highly on this food and body constituent. The stream of life flows, not from one grain of sugar to another, not from one starch cell to another, not from one globule of fat to another, but only from one molecule of protein to another protein molecule. Consequently, if life exists and multiplies itself, it must succeed in appropriating unto itself plenty of protein. This must be done either by the direct synthesis of it from the elements in the weather and those in the fertility of the soil, or by consumption of the amino acids already synthesized by some other living agency. Obtaining protein sufficient for body growth and reproduction is a strenuous struggle, whether it is by the simple microbial cell or the complex human body.

All life forms obtain their proteins according as the soil fertility permits. For the human, the protein problem is one of providing both the proper amount and the proper quality of it. As to the amount, this is a problem very often of the economics of purchase. As to the quality, this problem solves itself more readily by choice of those produced by life forms higher in the biotic pyramid, such, for example, as the animal proteins in meat, milk, eggs and fish. Plant proteins, originating lower in the biotic scale, often leave doubt as to their sufficiency in quality or their completeness in all the amino acids. Fortunately, some proteins originating in some forms as low as the yeast contribute specific qualities coming now to be highly appreciated.

Quality of proteins is a bigger problem according as we consider those given us by life forms of less complicated physiology. The proteins of the

complex synthetic potentialities in our meat animals are more nearly like those of our own bodies. They are therefore more nearly complete in quality. Meat is therefore such a universally desired food. Plant proteins too often represent a problem of supplementing them with animal proteins for our proper diet. Microbial proteins have food and feed values too as we recognize in well-ripened cheese for ourselves, and in those synthesized from urea, for example, by the microbial flora in the upper part of the animal intestinal tract for later assimilation during the conversion of feeds in digestive transit.

The problem of proteins for the wild animals is one of finding in the plants all the required amino acids. For this reason the deer browse on only the growing buds, that is, the highly reproductive parts with higher mineral and protein concentrations than the rest of the plant. The protein problem for our wild life is serious enough to be a potent force bringing on wild life extinction against which we are holding out hope while struggling to combat it by other means and in disregard of the soil fertility in control.

For our domestic animals we say it is a problem of "purchasing" protein feed supplements. For some farm animals these can be wholly vegetable in origin. For others they must be both vegetable and animal. For blockaded Britain, this problem meant almost the elimination of hogs and poultry while the farm animals of strictly herbivorous feeding habits were maintained. Here the longer animal gut that permitted more extensive symbiotic services by the microbial synthesizers of protein within it was almost a second Dunkerque in saving that country. The microbes, a life form so low in the biotic scale as to be right next to the soil, played a larger role in solving Britain's protein problem than we are wont to recognize.

Plant Has Harder Problem

The problem for the plant of providing its protein parts represents a still larger struggle. The plant is fixed in place. It must start with the simple elements, and possibly some limited compounds within root reach. From these it synthesizes first its amino acids and then synthesizes the proteins from them. Such is the problem of constructing its body by cellular multiplication, possible only through protein of its own complete elaboration.

Only the plants and life forms lower in the biotic pyramid, according to present knowledge, can synthesize amino acids. It is this plant process, in the main, which makes higher life forms so dependent on plants and through them dependent on the elements of fertility in the soil. It is this dependence of man and his animals on the amino acids—the building stones of the life-carrying proteins—synthesized by the plants generously only on the more fertile soils, that gives a pattern of the protein problem in agriculture. This pattern, in turn, is premised on the pattern of the fertility of the soil under consideration.

Synthesis of carbohydrates by plants is mainly a matter of the weather; synthesis of proteins is a problem of the soil fertility.

The plant's problem of making the carbohydrate part of its food is not so complex. According to the best knowledge we believe it a process of the union of carbon dioxdie and water brought about by the sun driven chemical process we call photosynthesis. Carbohydrates are the result of uniting these weather-given elements for which but few soil-borne nutrients are required. These are magnesium and iron in the chlorophyl for sugar synthesis, potassium for its conversions into other carbohydrates and possibly others. But all of these from the soil are required in only very small amounts, and then possibly only in catalytic services with none of them appearing in the carbohydrate itself.

THREE PAIRS IN A ROW

TOP: J. J. Grady (left) of William Eisenstadt Organization, and E. T. Nolan, *The National Provisioner Daily Market and News Service*. CENTER: John McGee (left), Geo. J. McGee & Sons, Philadelphia brokers, with Paul Kaiser, Rutherford Food Corp., Kansas City, Mo. BOTTOM: Chester Bowman, *The National Provisioner Daily Market and News Service*, talks over business prospects with Herman Herzog of Alfred Jacobshagen Co., Chicago hide dealers.

The plant assembles this energy providing part of itself readily. In fact, the carbohydrate is the basic raw material for constructing the plant mass of cellulose and other major parts of its bulk. This process is the readily recognizable demonstration of increase in size that we call plant growth. It is this carbohydrate synthesis that has long been our measure of agricultural production and of the productivity of the soil. So little of soil fertility is required for mere production of carbohydrates that the deficiencies in the soil seldom impose serious restrictions on this process. Carbohydrates, or energy foods for plants, do not represent much of a struggle. They are readily synthesized. They are mainly supra-soil in terms of the raw materials and the energy for their construction.

Importance of Calcium

But for the conversion of the carbohydrates of photosynthetic origin into the proteins of biosynthetic origin, much soil fertility is required. For the growth of the protein-rich legumes, we have long known that the soil must supply considerable calcium. For that reason we have limed the land. We now know that non-legumes, too, require calcium if they are to be more proteinaceous.

Calcium is not only an agent in protein synthesis but is also a potent force in mobilizing other nutrients as well as itself into the plant roots. As a consequence, soils that are not leached by high rainfalls but are still stocked with calcium and other mineral nutrients grow forages, both legume and non-legume, that are rich in proteins and rich in minerals of nutrient values not yet fully understood.

Protein production by our crops, which is recognized more commonly as generous seed production, calls for a generous delivery of all the soil-borne nutrient elements by the assembly lines in the soil as well as for a carbohydrate manufacturing activity drawing mainly on carbon, hydrogen and oxygen from the weather. Conditions very commonly permit the plants to produce carbohydrates, but for the conversion of these into proteins the conditions are not so generally favorable. For this conversion some dozen or more nutrients of mineral origin with calcium at the head of the list must be provided. We now know that most plants are potentially producers of much more protein, but that the shortages in the fertility of the soil prohibit their meeting their potentiality and limit them to the delivery mainly of carbohydrates.

Soil fertility comes into decided prominence, then, in the struggle for protein by the plant, by the animal and by us humans. The plant's synthesis of itself

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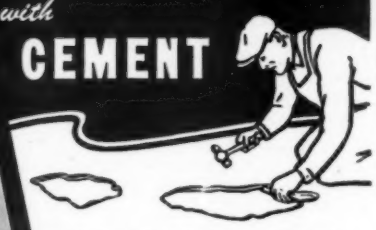

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as carbonaceous bulk is not seriously stymied by deficiencies of some on the list of nutrient elements we call soil fertility. Nor is it stymied if it reproduces vegetatively. Under such reproduction it maintains the bulk of itself seemingly well. Consequently as long as our observation of the plant as bulk is our only criterion of soil productivity, we are oblivious to the role of soil fertility in making proteins as the important services by plants for higher life forms like animals and man. It is the provision of proteins made up of their many different amino acids that determines the seed yield and the reproduction by plants. It also determines the survival of man and his animals with him. It is via protein production by our crop plants that the pattern of soil fertility gives the ecological pattern of the people in the United States and in the world as a whole.

High protein delivery by plants occurs on the calcareous soils developed under moderate rainfall and temperature. Since soils are a temporary reststop by rocks on their way to solution and the sea, they vary widely in fertility according to the distance they have been pushed in that direction by the climatic forces of rainfall and temperature. In the early stages of this travel, the soils that are still mainly rock because of low annual rainfall do not contain enough clay. Nor is that clay sufficiently saturated by a diverse list of nutrient elements through extensive rock breakdown to make productive soils. Very often the clay of such soils is saturated with too much sodium. But under increased amounts of rainfall approaching 30 in. annually, and under moderate temperatures like those of the temperate zone, the soils contain ample clay. This soil separate is well stocked with calcium and other nutrients, to say nothing of there being left also plenty nutrient mineral reserves in the silt separate. These, by their continued breakdown, serve to maintain a relatively high nutrient saturation of the clay. Such soil areas grow the annual and periodically dormant grass crops we call the prairie grasses. They do not allow forests or other perennials to survive their drought periods. This is the region of the highly proteinaceous vegetation that supports the herbivora today much like it supported the buffalo which the pioneer found so plentiful.

Temperature and Rainfall

Under annual rainfalls higher than 30 in. the perennial vegetation like the forests is common. With these and still heavier rainfalls but moderate temperatures the leaching effects on the clay result in the removal of its stock of adsorbed fertility. The leaching substitutes hydrogen or acidity on the clay for it. The reserve minerals in the silt are weathered out to leave the silt and sand fractions that consist mainly of quartz and hence of no nutrient values.

Under both higher rainfalls and higher temperatures, the clay as the remnant of rock weathering is no longer the silicate compound with its high exchange capacity for nutrient ions. Instead, it represents the loss of silica and is the red lateritic clay so high in iron and aluminum with almost no exchange capacity. It fails to hold even hydrogen or to be acid. It will therefore hold little or none of the many other cations with nutritional services to plants, animals and man. Tropical red soils, then, have little fertility adsorbed on their clay. Nor do they contain reserve minerals as potential fertility to be weathered out eventually as is true for soils under moderate rainfall and moderate temperature. They are therefore producers mainly of wood. Animal and other higher life there struggles for proteins. Carnivora rather than herbivora are the rule in their fauna.

Soils that are productive, in terms of delivery of protein, then, are those developed under moderate to scanty rainfall in the temperate zone. It is on these where vegetative bulk is not so plentifully produced because, as we so commonly say, "there just isn't enough rainfall." Soils that are highly productive in giving us carbohydrates and much vegetative bulk occur under higher rainfalls. These larger amounts of water, when under moderate temperatures, leach them to a state of strong acids on a montmorillonitic clay, but to a lateritic clay with almost no acidity under tropical heat. For vegetation as

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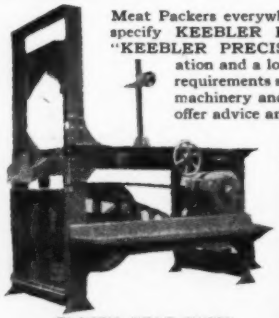

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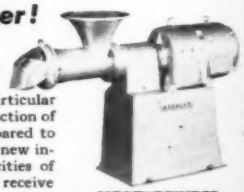

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a generous producer of protein there must be both enough rainfall for carbohydrate production and at the same time enough of the fertility of the soil for the biosynthetic conversion of this fuel food into protein as the growth-promoting food. This combination of climate and soil fertility is not so universally found. Hence it is evident that protein production is not so universal an occurrence. Rather it is in limited areas. Outside of these areas it is possible only as we duplicate their fertility conditions by our management of the soil.

Soil Fertility and Proteins

A careful study of the fertility of the soils of the United States formulates a pattern of it that gives helpful suggestions for our struggle with the protein problem. Starting from the arid West and going eastward, there are increasing rainfall and increasing degrees of the development of the rocks into soil. This gives increasing clay content and an increasing stock of fertility on that clay until the rainfall amounts to that of about the mid-continental area. The still higher rainfalls then as one goes eastward from there mean the loss of fertility from the clay and the substitution of acidity for it. This increasing incidence of acidity represents a sharp decline in the supply of the many fertility elements.

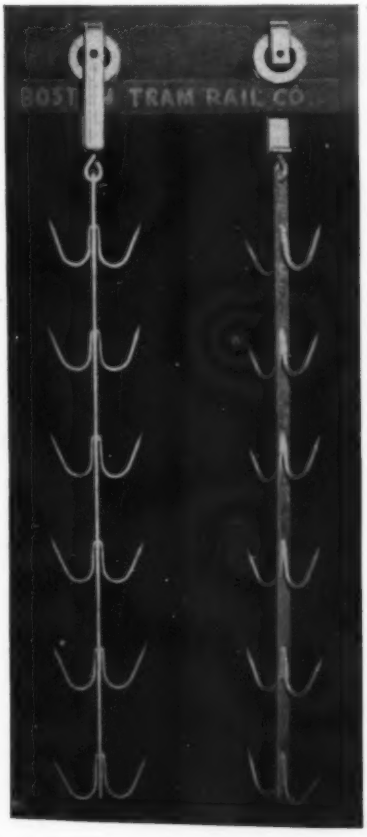
Unfortunately, however, the calcium supply decreases so much faster than the others on the list of soil-borne essentials. This results then in a narrowing ratio of the calcium to the potassium, for example. This fact represents a decided reduction of the protein-producing power inherent in the calcium, while the carbohydrate-producing power represented by the potassium is much less reduced. Consequently, in this lowered ratio of the exchangeable calcium to the exchangeable potassium, brought on by soil fertility removal either by nature or by man, we have the clue for the lowered protein output by the soils while the output of carbohydrate holds up. Here is the chemical foundation in terms of soil fertility from which we must take our suggestion and work in making protein-production possible through judicious soil management.

Up to this time in our land use we have been putting limestone on our soils under the mistaken belief that the benefits from it rested in the reduction of the acidity of the soil by the carbonate radical. Unwittingly, we have been applying calcium and helping to manufacture more proteins in the legume forages. But, unfortunately also we have gone forward in our soil liming campaign under the belief that lime is all that is needed, and that "if a little is good more will be better." This generous use of lime has mobilized out of our soils and into greater production of our crops many of the other elements, among which potassium has been most prominent. We are not coming face to face with the soil's need for potassium. We have credited the lime and its neutralization of acidity with working wonders while unbeknown to us it was helping to exhaust our soil fertility more rapidly in many other respects than calcium.

Soils Need Potassium

It is essential to remember that we need potassium to make the carbohydrates first in the plant before it can convert them into protein. Red clover was once said to fail because of acid soils. But this crop as a great livestock feed has not come back on increased acreage now that we have the hordes of trucks covering thousands of acres with limestone. It has not come back because our humid soils need potassium as well as calcium. They possibly need also many other nutrient elements if clover is to grow and to manufacture the collection of amino acids that constitute its proteins and make it such a desirable feed.

We have been fighting soil acidity when we should have been supplying calcium as the foremost help in protein synthesis by our crops. We have been aware of only one element of fertility when we should be aware of several. We have been hunting for new crops instead of restoring the fertility to sustain those that are of higher nutritive values because they require more help from the soil fertility to make themselves so. Instead of undergirding the more nutritious forages in their struggle to syn-



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thesize protein we have been juggling crops with their production of tonnage per acre as the only criterion. Sweet clover, bolstered by an application of limestone, replaced red clover because the former has a tremendous tonnage-producing power. This replacement has occurred in spite of the vigorous protest of our cattle against sweet clover as a feed for them, and our appreciation of red clover and alfalfa as so much better feed. Soil acidity has been a mental bayou within which we paddled circuitously about when we should have been rowing down the stream of straighter thinking to reach the conclusion that soil acidity is not a serious trouble per se, but is only the reciprocal of the exhaustion of the soil fertility.

Westward Movement

We have been mining our soils and moving westward, rather than maintaining their fertility. We have now had enough experience in the production of feeds and livestock in the United States to have the problem areas well located. High output of protein as beef and mutton is most efficient on the soils well stocked with calcium and less weathered of their other fertility elements. It occurs on the soils where plants can manufacture themselves more from the soil and less from the weather and make more protein. High output of fat as hogs may be found where starchy feeds dominate and the lower fertility limits us to crops originating more from the weather to give mainly carbohydrate products. That we have been mining our soils and thereby are being driven westward is now becoming evident. The milksheds of the East are no longer producing milk by means of the wheat bran, the shorts and the other concentrates moved eastward so freely from the more fertile soils of the western "hard" wheat area. The largest beef cattle market is now Kansas City with other cities located approximately along the same meridian of longitude also handling more sheep and cattle than they ever have previously.

Right here in the Corn Belt we have swelled in our pride of pushing up the yield as bushels of corn per acre, yet during the last ten years the protein concentration in that feed grain has dropped from an approximate average figure of 9.5 to 8.5 per cent. The bulk-producing and the fattening powers of our agricultural output have held up. But the power for promoting growth and reproduction, which resides in the protein and not in the starch of the feeds, has gone down. Hybrid corn that disregards its need for reproducing itself does not report to us the shortages of soil fertility by manifesting its increasing sterility. Here in this feed crop, like in the horticultural crops that are multiplied by cuttings and buddings instead of by seeds, the carbohydrate production holds our attention and generates economic satisfaction while no attention goes to the declining soil fertility that is making seed production—and thereby the plant's reproduction—impossible.

Animal sterility, too, is an increasing trouble. We are not apt to see this as a problem of producing protein in the form of sperm and ova dependent on soil fertility via proteinaceous and mineral-rich feeds. Crop juggling with bulk as the objective has brought more carbonaceous and less proteinaceous forages and feeds into our systems of land use. With them have come the increasing animal deficiencies. We are not very apt to see the declining soil fertility as the cause of these and take to treating our soils for their prevention. Instead we are apt to build a false hope on artificial insemination and other contrivances of the breeding business.

Seemingly only by more disasters will we eventually come to see in the fertility of the soil the ultimate of the synthetic performances that give us protein, which not only represents the power of reproduction but the power of growth itself. When only 60 per cent of our annual pig crop survives to be marketed, and when "shy-breeders" cause much of our animal reproducing power to stay idle annually, we need to see that these troubles in their pattern of severity superimpose themselves on the soil. We cannot continually move westward to fertile virgin soils. We must face the problem now that we can no longer run away from it.

The protein problem is a world food problem according to soil fertility. Two

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world wars that were fought under the slogan that "Food Will Win the War and Write the Peace," ought to encourage our inventory of the soil resources that were the food resources by which one group of the fighting nations became the victors while another became the vanquished. We may well look to the soil fertility supplies by which the three Great Powers emerged in the category of that distinction and only by which they will stay there.

One needs to look at the soil map of the world and to remember that proteins of high food value as found in hard wheat, beef and mutton, for example, are the products of soils that are only moderately weathered. Such soils and such protein products, then, must occur under moderate rainfalls and in the temperate zone. Such soils with extensive areas of hard wheat and animal herds in large numbers occur in the mid-continental United States. Likewise there are similar extensive areas in the Soviet Republic. It is these soil fertility resources in terms of protein production that give strong suggestions why these two nations are listed among the Great Powers. As for England in this category with them, the British Isles do not have extensive areas of soils that produce hard wheat. But when Canadian soils represent high protein-producing powers, and corresponding soils are extensive in Australia and South Africa—all parts of the British Empire, there is ample suggestion that ships on the sea represent the strength of this third one of the three Great Powers.

The strength of any nation—in what is too readily considered as a political strength—depends on high levels of fertility of the soils that represent protein production as food. The weak powers, under the analysis for their soil resources, all reflect very clearly their insufficiency as producers of food proteins. It is in terms of soil fertility resources and not of international politics that the world must be inventoried if we are to understand and solve the international food problem. We must realize that it is very acutely a protein problem rather than one of only calories.

Seemingly we are still nomadic in our hopes and in our thinking about our future food supplies. We are delayed in realizing that about all the land areas of significant protein power have been taken over and put into production. We are still more delayed in appreciating the problem of maintaining in the future the capacity to produce protein where such was a simple matter in the past. We need careful inventories of the fertility resources in our soils, and of the supplies of minerals that can serve as fertilizers in soil fertility restoration. Those of us living in cities, those managing big industries and all in the congested food-consuming rather than food-producing centers need to understand and appreciate the rate at which our soils are being exploited and not rebuilt. All of us need to aid and encourage soil restoration in terms of those nutrient elements serving in the struggle for protein: (a) in the life of the microbe in the soil, (b) in the life of the crops in the field, (c) in the life of the animals and (d) in our own human lives. We need to realize that T-bone steaks are not grown on city pavements, but only where the fertility of the soil keeps the assembly lines filled with the raw materials on which all agricultural production and food production depend.

As fast as that realization comes to us we shall become soil conservationists aiming not only to stop the damages to the soil by running water, but also to rebuild the fertility strength in the body of the soil. It was by that kind of strength that the soil originally saved itself and that it can do so again under our realization of the fertility facts and by our action accordingly. Only as we build back according to the pattern of the soil fertility can we solve the problem of producing plenty of protein, which as a food product is not the particular concern of the meat industry alone, but of us individuals, of the nation and of the whole world itself.

AMERICAN MEAT INSTITUTE BUSINESS SESSION

CHAIRMAN KREY: We will go into the business session of the forty-second annual convention of the Institute. I would like to entertain a motion for the purpose of dispensing with the reading of the minutes of the previous meeting.

Upon motion duly made and seconded, it was voted to dispense with the reading of the minutes.

CHAIRMAN KREY: Harold Meyer, the secretary and treasurer of the Institute, will you please read the treasurer's report?

HAROLD MEYER: The Institute's annual meeting this year comes a month before the close of its fiscal year on September 30. Therefore, my report of necessity represents a projection based upon operations for the first ten months of the year.

It is expected that receipts this year will exceed total operating expenditures by a small amount. Surplus, however, will be decreased by approximately $25,000, due to appropriations out of surplus, made by the board of directors to cover contributions to the National Live Stock and Meat Board, the sanitary board of the National Live Stock Exchange and to the Food Research Institute. These appropriations have reduced surplus to $26,000.

Dues receipts this year will be about the same as last year, but total operating expenses will be about $20,000 below such expenditures during the prior fiscal year. Contributions this year will be increased by approximately $8,000.

During the past five or six years, Institute expenditures have been unusually heavy, due to extraordinary activities. It is believed that expenditures in this category in the future will be nominal in amount and that operating expenditures, including increased costs due to present economic conditions, will be covered adequately by the anticipated income.

Upon motion duly made and seconded, it was voted to accept the report of the treasurer.

CHAIRMAN KREY: W. R. Sinclair is the chairman of the nominating committee. Will you read your report?

Mr. Sinclair read the report of the committee and it was moved and seconded and approved that the secretary cast a unanimous vote for the candidates nominated, Officers of the Institute for 1947–48 are listed on page 261.

The meeting adjourned at 4:00 p.m.

NICK BEUCHER, JR. JOHN LINDQUIST

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FEDERALLY INSPECTED MEAT PRODUCTION FOR LABOR DAY WEEK 4% BELOW PREVIOUS WEEK

Production of meat under federal inspection during the week ended September 6 dropped only 4 per cent under the previous week, in spite of the Labor Day holiday, and totaled more than three times the volume of the corresponding week a year ago, when OPA controls had just been reinstated and the movement of livestock dropped.

The total for the week ended September 6 was 257,000,000 lbs., compared with 268,000,000 in the preceding week, and only 83,000,000 a year ago.

Cattle slaughter was estimated at 291,000 head. This was 4 per cent over the 281,000 slaughtered in the preceding week, and over 3½ times the 79,000 slaughtered in the same week of 1946. Production of beef was placed at 133,000,000 lbs., compared with 132,000,000 the week before, and 39,000,000 a year earlier.

Slaughter of calves was estimated at 145,000 head—4 per cent below the 151,000 which were slaughtered in the preceding week, and more than twice the 70,000 total of the same week in 1946. Production of inspected veal for the three weeks being compared was 18,400,000, 19,000,000 and 8,300,000 lbs., respectively.

Hog slaughter was estimated at 591,000 head. This was 8 per cent below the 640,000 slaughtered in the preceding week, but nearly 4 times the 159,000 killed in the same week a year ago. Estimated production of pork was 93,000,000 lbs., compared with 105,000,000 in the previous week, and 25,000,000 a year ago. Lard production was placed at 21,900,000 lbs., compared with 23,700,000, the week before, and 4,100,000 in the same week of 1946.

Sheep and lamb slaughter was estimated at 277,000 head—3 per cent below the 287,000 reported for the preceding week, but 8 per cent more than the 256,000 processed in the same week a year ago. Production of inspected lamb and mutton was 11,600,000, 12,100,000, and 10,700,000 lbs., respectively.

ESTIMATED FEDERALLY INSPECTED SLAUGHTER AND MEAT PRODUCTION

Week ended September 6, 1947, with comparisons

Week Ended	Beef		Veal		Pork (excl. lard)		Lamb and mutton		Total meat
	Number 1,000	Prod. mil. lb.	Number 1,000	Prod. mil. lb.	Number 1,000	Prod. mil. lb.	Number 1,000	Prod. mil. lb.	Prod. mil. lb.
Sept. 6, 1947	291	133.3	145	18.4	591	93.4	277	11.6	256.7
Aug. 30, 1947	281	132.1	151	19.0	640	105.0	287	12.1	268.2
Sept. 7, 1946	79	38.9	70	8.3	159	24.6	256	10.7	82.5

Week Ended	AVERAGE WEIGHT—LBS.								LARD PROD.	
	Cattle		Calves		Hogs		Sheep & lambs		Per 100	Total mil.
	Live	Dressed	Live	Dressed	Live	Dressed	Live	Dressed	lbs.	lbs.
Sept. 6, 1947	896	458	231	127	277	158	90	42	13.4	21.9
Aug. 30, 1947	905	470	230	126	285	164	92	42	13.0	23.7
Sept. 7, 1946	932	492	216	119	256	155	90	42	10.0	4.1

U. S. MEAT IMPORTS-EXPORTS

	July, 1947 lbs.	July, 1946 lbs.
EXPORTS (domestic)—		
Beef and veal, fresh or frozen	17,338,815	5,438,178
Beef and veal, pickled or cured	865,445	20,896
Pork—		
Fresh or frozen	568,551	12,388,529
Wiltshire and Cumberland sides	...	1,267,951
Hams and shoulders, cured	99,376	912,373
Bacon	82,226	21,286,152
Other pork, pickled or salted	866,867	6,414,637
Mutton and lamb	1,094,960	455,856
Sausage, including canned and sausage ingredients	897,349	8,690,744
Canned Meats—		
Beef	218,784	24,452,661
Pork	338,098	7,142,229
Tushonka	...	18,392,145
Other canned meats[1]	404,656	59,781,212
Other meats, fresh, frozen, or cured—		
Kidneys, livers, and other meats, n.e.s.	910,186	16,226
Lard, including neutral	13,369,645	52,535,229
Tallow, edible	5,282	76,300
Tallow, inedible	4,608,504	477,654
Grease and lard stearin	200	1,000
IMPORTS—		
Beef, fresh or frozen	73,063	99,364
Veal, fresh or frozen	...	833
Beef and veal, pickled or cured	...	315,141
Pork, fresh or frozen	...	...
Hams, shoulders and bacon	5,089	29,534
Pork, other pickled or salted	10,800	27,037
Mutton and lamb	...	...
Canned beef	200,124	21,240
Tallow, edible	...	...
Tallow, inedible	240,000	60,000

[1]Includes many items which consist of varying amounts of meat.

CUTTING RESULTS IMPROVE SHARPLY AS PRODUCT VALUES SOAR TO HIGHER LEVELS

(Chicago costs and credits, first three days of week)

Both total product values and live animal costs advanced to substantially higher levels this week in a market which saw some major pork cuts rising as much as 2c per pound and lard nearly 3c per pound. This resulted in more favorable cut-out results for all weights of hogs. Light stock showed a 95c plus margin as compared with 33c last week. Medium weights advanced to a plus 4c from a minus 65c and heavy animals registered a minus margin of $2.18, compared with a minus $2.52 last week.

This test is computed for illustrative purposes only. Each packer should figure his own test, using actual costs, credits, yields and realizations. Values reported here are based on figures for the early part of each week.

	——180-220 lbs.——					——220-240 lbs.——					——240-270 lbs.——				
				Value					Value					Value	
	Pct. live wt.	Pct. fin. yield	Price per lb.	per cwt. alive	per cwt. fin. yield	Pct. live wt.	Pct. fin. yield	Price per lb.	per cwt. alive	per cwt. fin. yield	Pct. live wt.	Pct. fin. yield	Price per lb.	per cwt. alive	per cwt. fin. yield
Skinned hams	12.5	18.1	61.5	$ 7.69	$11.13	12.5	17.7	61.5	$ 7.69	$10.89	12.9	18.1	60.0	$ 7.74	$10.86
Picnics	5.6	8.1	45.5	2.55	3.69	5.4	7.7	44.4	2.40	3.42	5.3	7.4	41.2	2.16	3.05
Boston butts	4.2	6.1	47.3	1.99	2.89	4.1	5.8	47.0	1.93	2.73	4.1	5.7	45.0	1.84	2.57
Loins (blade in)	10.1	14.6	63.3	6.38	9.24	9.8	13.9	58.5	5.73	8.13	9.7	13.4	47.5	4.60	6.37
Bellies, S. P.	11.0	15.9	56.3	6.18	8.95	9.5	13.5	56.3	5.35	7.60	3.9	5.5	54.1	2.11	2.98
Bellies, D. S.	...	...	...	...	...	2.1	3.0	36.5	.77	1.10	8.5	12.0	36.5	3.10	4.38
Fat backs	...	...	...	...	...	3.2	4.5	14.0	.45	.63	4.5	6.4	15.5	.70	.99
Plates and jowls	2.9	4.2	23.5	.68	.99	3.0	4.2	23.5	.71	.99	3.4	4.8	23.5	.80	1.13
Raw leaf	2.2	3.2	18.2	.40	.58	2.2	3.1	18.2	.40	.56	2.2	3.1	18.2	.40	.56
P. S. lard, rend. wt.	13.7	19.9	19.6	2.69	3.90	12.2	17.3	19.6	2.39	3.39	10.1	14.5	19.6	1.96	2.84
Spareribs	1.6	2.3	44.3	.71	1.02	1.6	2.3	33.5	.54	.77	1.6	2.2	24.5	.37	.54
Regular trimmings	3.2	4.7	27.8	.89	1.31	2.9	4.2	27.8	.81	1.17	2.8	4.1	27.8	.78	1.14
Feet, tails, neckbones	2.0	2.9	14.1	.28	.41	2.0	2.8	14.1	.28	.39	2.0	2.8	14.1	.28	.39
Offal and miscellaneous	...	...	...	.80	1.16	...	...	...	.80	1.14	...	...	...	.80	1.13
TOTAL YIELD AND VALUE	69.0	100.0	...	$31.24	$45.27	70.5	100.0	...	$30.25	$42.91	71.0	100.0	...	$27.64	$38.93
				Per cwt. alive					Per cwt. alive					Per cwt. alive	
Cost of hogs				$29.06					$29.17					$28.86	
Condemnation loss				.15	Per cwt. fin. yield				.15	Per cwt. fin. yield				.15	Per cwt. fin. yield
Handling and overhead				1.08					.89					.81	
TOTAL COST PER CWT.				$30.29	$43.90				$30.21	$42.84				$29.82	$42.00
TOTAL VALUE				31.24	45.27				30.25	42.91				27.64	38.93
Cutting margin				+$ .95	+$ 1.37				+$ .04	+$ .07				—$ 2.18	—$ 3.07
Margin last week				+ .33	+ .48				— .65	— .92				— 2.52	— 3.54

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MEAT AND SUPPLIES PRICES

Chicago

WHOLESALE FRESH MEATS

CARCASS BEEF

Week ended Sept. 10, 1947 per lb.

Choice native steers—
All weights .....50 @53
Good native steers—
All weights .....48 @49
Commercial native steers—
All weights .....36 @42
Cow, commercial .....30 @32
Cow, canner and cutter.....24 @25
Hindquarters, choice .....61 @63
Forequarters, choice .....41 @43
Cow, hindquarter, comm... ....
Cow, forequarter, comm... ....

BEEF CUTS

Steer loin, choice.....90@98
Steer loin, good.....85@88
Steer loin, commercial.....65@68
Steer round, choice.....51@55
Steer round, good.....50@53
Steer rib, choice.....75@80
Steer rib, good.....68@71
Steer rib, commercial.....47@50
Steer rib, utility..... 30
Steer sirloin, choice.....80@85
Steer sirloin, commercial.....50@55
Steer chuck, choice.....42@44
Steer chuck, good.....42@44
Steer chuck, commercial.....39@41
Steer brisket, choice.....45@47
Steer brisket, good.....45@47
Steer back, choice..... 50
Steer back, good..... 49
Fore shanks 24
Hind shanks 20
Beef tenderloins .....1.50@1.55
Steer plates .....18@20

BEEF PRODUCTS

Brains ..... 6 @ 7
Hearts .....12 @13
Tongues, select, 3 lbs. & up, fresh or froz.....29 @30
Tongues, house run, fresh or froz.....24 @26
Tripe, cooked .....11 @12
Livers, selected .....46 @47
Kidneys .....19 @22
Cheek meat .....23½@24½
Lips ..... 6 @ 6¼
Lungs ..... 5½@ 6
Melts ..... 6 @ 7

FRESH PORK AND PORK PRODUCTS

Fresh sk. ham, 8/18.....61 @62
Reg. pork loins, und. 12 lb.....64 @65
Picnics .....44 @46
Skinned shldrs., bone in....41½@42
Spareribs, under 3 lbs.....44 @45
Boston butts, 3/8 lbs.....49 @50
Boneless butts, c.t.....62 @64
Neck bones .....15 @16
Pigs' feet, front.....11 @12
Kidneys .....15 @16
Livers .....27½@28½
Brains .....17 @18
Ears ..... 9 @10
Snouts, lean in.....11 @11½

VEAL—HIDE OFF

Choice carcass .....38@40
Good carcass .....34@36
Commercial carcass .....27@32
Utility .....22@28

CALF

Choice, 225 to 300 lbs.....35@36
Good, 225 lbs. down.....32@33
Commercial .....26@28
Utility .....22@28

LAMBS

Choice lambs .....48@50
Good lambs .....46½@48
Commercial lambs .....43@45
Utility .....33@37

MUTTON

Good .....20@21
Commercial .....18@19
Cull .....14@15½

SAUSAGE MATERIALS

Reg. pork trim (50% fat) .29 @31
Sp. lean pork trim, 85%...39 @40
Ex. lean pork trim, 95%...45 @45½
Pork cheek meat.....29 @30
Pork tongues .....21 @22
Boneless bull meat.....37½@38½
Boneless chucks .....36 @37
Shank meat .....36 @36½
Beef trimmings .....32 @33
Dressed canners .....26½@27
Dressed cutter cows.....26½@27½
Dressed bologna bulls.....29½@30

SAUSAGE CASINGS

(F. O. B. Chicago)
(Prices quoted to manufacturers of sausage.)

Beef casings:
Domestic rounds, 1¾ to 1½ in., 180 pack.....35 @40
Domestic rounds, over 1½ in., 140 pack.....40 @55
Export rounds, wide, over 1½ in. .....65 @75
Export rounds, medium, 1¾ to 1½.....40 @50
Export rounds, narrow, 1⅜ in. under.....70 @90
No. 1 weasands, 24 in. up.11 @12
No. 1 weasands, 22 in. up. 9 @11
No. 2 weasands..... 6 @ 8
Middle sewing, 1¾ @ 2 in. .....90 @1.20
Middles, select, wide, 2@2¼ in. .....1.25@1.35
Middles, select, extra, 2¼@2½ in. .....1.40@1.60
Middles, select, extra, 2½ in. & up.....1.90@2.15
Beef bungs, export No. 1..17 @18
Beef bungs, domestic..... 8 @14
Dried or salted bladders, per piece:
12-15 in. wide, flat.....12 @13½
10-12 in. wide, flat..... 8 @ 9½
8-10 in. wide, flat..... 5 @ 6½
Pork casings:
Extra narrow, 29 mm. & dn. .....2.45@2.85
Narrow mediums, 29@32 mm. .....2.45@2.75
Medium, 32@35 mm.....2.10@2.40
Spe. medium, 35@38 mm.2.00@2.45
Wide, 38@43 mm.....1.90@2.25
Export bungs, 34 in. cut.34 @37
Large prime bungs, 34 in. cut.....28 @32
Medium prime bungs, 34 in. cut.....20 @23
Small prime bungs.....13 @16
Middles, per set.....30 @33

CURING MATERIALS

	Cwt.
Nitrite of soda (Chgo. w'hse) in 425-lb. bbls., del.....	$ 8.75
Saltpeter, n. ton, f.o.b. N. Y.:	
Dbl. refined gran.....	9.50
Small crystals	12.90
Medium crystals	13.90
Pure rfd., gran. nitrate of soda.	4.50
Pure rfd. powdered nitrate of soda	unquoted
Salt, in min. car of 80,000 lbs. only, f.o.b. Chgo., per ton:	
Granulated, kiln dried.....	9.70
Medium, kiln dried.....	12.70
Rock, bulk, 40 ton cars.....	8.80
Sugar—	
Raw, 96 basis, f.o.b. New Orleans	5.20
Standard gran., f.o.b. refiners	6.10
Packers' curing sugar, 250 lb. bags, f.o.b. Reserve, La., less 2%	5.15
Dextrose, in car lots, per cwt., (cotton)	8.75
In paper bags.....	8.65

WHOLESALE SMOKED MEATS

Fancy regular hams, 14/18 lbs., parchment paper .....60¼ @62¾
Fancy skinned hams, 14/18 lbs., parchment paper .....69 @70½
Fancy trim. brisket off, bacon, 8 lb. down, wrap.60½@71
Square cut seedless bacon, 8 lb. down, wrap.....63 @65
No. 1 beef sets, smoked
Insides, C Grade..... ....
Outsides, C Grade..... ....
Knuckles, C Grade..... ....

SEEDS AND HERBS

	Whole	Ground for Saus.
Caraway Seed	20@22	24 @26
Cominos seed	33@35	38 @40
Mustard sd., fcy. yel.	20@21	.. ..
American	18@19	.. ..
Marjoram, Chilean ..	15@18	19 @20
Oregano	21@22	25 @26

SPICES

(Basis Chgo., orig. bbls., bags, bales)

	Whole	Ground
Allspice, prime....28	@30	31@33
Resifted 29	@30	32@34
Chili powder		36@45
Cloves, Zanzibar ..19½@21		23½@24
Ginger, Jam., unbl.. 21		24
Cochin 19	@20	22@24
Mace, fcy. Banda.....	..	..
East Indies	1.80@1.85	
West Indies	1.75@1.80	
Mustard, flour, fcy.....		35
No. 1		26
West India Nutmeg...		78@80
Paprika, Spanish		54@55
Pepper, Cayenne		37@40
Red, No. 1.....		35@39
Pepper Packers		49@50
Pepper, black		44@46
Pepper, white		62@65
Minced luncheon spec., ch.		35½@37½
Tongue and blood.....		....
Blood sausage		....
Souse		27½@28½
Polish sausage		41½@42½

FANCY MEATS

Tongues, corned 45
Veal breads, under 6 oz..... 70
6 to 12 oz..... 80
12 oz. up.....1.05
Beef kidneys .....20@30
Lamb fries .....46@48
Beef livers 55
Ox tails under ¾ lb..... 16
Over ¾ lb..... 30

DRY SAUSAGE

Cervelat, ch. hog bungs....77 @79
Thuringer .....42 @43½
Farmer .....60 @62
Holsteiner .....60 @62
B. C. Salami..... 73½
B. C. Salami, new, cond... 43½
Genoa style salami, ch.... 88
Pepperoni 68
Mortadella, new condition.. 42½
Cappicola (cooked) 90
Italian style hams..... 76

DOMESTIC SAUSAGE

Pork sausage, hog casings. 49
Pork sausage, bulk..... 47
Frankfurters, sheep casings 47
Frankfurters, hog casings.. 46½
Bologna 40½
Bologna, artificial casings.. 40
Smoked liver, hog bungs...45 @46
New Eng. lunch, specialty.59 @61

See also Page 172

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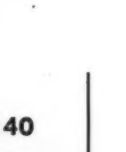

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From The National Provisioner Daily Market Service

CASH PRICES

CARLOT TRADING LOOSE BASIS F.O.B. CHICAGO OR CHICAGO BASIS

THURSDAY, SEPTEMBER 11, 1947

REGULAR HAMS

	Fresh or Frozen	S.P.
8-10	60n	60n
10-12	60n	60n
12-14	60n	60n
14-16	60n	60n

BOILING HAMS

	Fresh or Frozen	S.P.
16-18	58n	58n
18-20	56n	56n
20-22	52n	52n

SKINNED HAMS

	Fresh or Frozen	S.P.
10-12	62½@63	62¾n
12-14	62½@63	62¾n
14-16	62½@63	62¾n
16-18	61	61n
18-20	59	59n
20-22	54½	54½n
22-24	53	53n
24-26	47	47n
25-30	46	46n
25-up, No. 2's inc.	42	...

OTHER D.S. MEATS

	Fresh or Frozen	Cured
Reg. plates...	23½n	23½n
Clear plates...	18½n	18½n
Square jowls..	32n	32n
Jowl butts....	28@28½	27½@28

PICNICS

	Fresh or Frozen	S.P.
4- 6	46½	46½
6- 8	45½@46	45½
8-10	42	42
10-12	39	39
12-14	35½	35½
8-up, No. 2's inc.	35½	....

BELLIES

	Fresh or Frozen	Cured
6- 8	58½	59½
8-10	58½	59½
10-12	58½	59½
12-14	58½	59½
14-16	57	58
16-18	53	54
18-20	47	48

D.S. BELLIES

	Clear
18-20	39
20-25	39
25-30	39
30-35	39
35-40	39
40-50	36@36½

FAT BACKS

	Green or Frozen	Cured
6- 8	17½	17½
8-10	17½	17½
10-12	17½	17½
12-14	18	18
14-16	18½	18½
16-18	19	19
18-20	19	19
20-25	19	19

LARD FUTURES PRICES

MONDAY, September 8, 1947

	Open	High	Low	Close
Sept.	19.30	19.80	19.30	19.60b
Oct.	19.95	19.95	19.60	19.85
Nov.	20.25	20.35	19.65	20.10
Dec.	23.75	24.25	23.40	24.00
Jan.	24.00	24.45	23.60	24.05
Mar.	24.50	25.00	24.00	24.55
May	25.00	25.40	24.55	25.10a

Sales: 15,070,000 lbs.

Open interest at close Fri., Sept. 5th: Sept., 24; Oct., 72; Nov., 795; •Dec., 267; •Jan., 95; •Mar. 275; at close Sat., Sept. 6th: Sept., 14, Oct., 65; Nov., 785; •Dec., 280; •Jan., 93; •Mar., 314, •May, 5 (•40,000 lb. lots).

TUESDAY, September 9, 1947

Sept.	20.00	21.60	20.00	21.45a
Oct.	20.00	21.75	19.95	12.75b
Nov.	20.10	22.00	20.10	21.85
Dec.	24.15	25.95	24.10	25.85
Jan.	24.20	26.05	24.20	25.95
Mar.	24.80	26.55	24.77½	26.55
May	25.35	27.10	25.35	27.00

Sales: 21,790,000 lbs.

Open interest at close Mon., Sept. 8th: Sept., 16; Oct., 59; Nov. 779; •Dec., 283; •Jan., 114; •Mar., 360; •May, 17 (•40,000 lb. lots).

WEDNESDAY, September 10, 1947

Sept.	21.70	23.45	21.70	21.75a
Oct.	22.65	23.12½	21.90	21.90a
Nov.	22.00	23.40	21.85	21.85b
Dec.	26.15	27.50	25.40	25.95
Jan.	26.75	27.75	25.70	26.00a
Mar.	27.00	28.00	26.00	26.35
May	27.50	28.50	26.50	26.90

Sales: 25,850,000 lbs.

Open interest at close Tues., Sept. 9th: Sept., 21; Oct., 47; Nov., 758; •Dec., 296; •Jan., 111; •Mar., 383; •May, 29 (•40,000 lb. lots).

THURSDAY, September 11, 1947

Sept.	22.65	22.85	21.85	22.00b
Oct.	23.25	23.25	22.00	22.05
Nov.	23.00	23.00	22.05	22.05
Dec.	26.25	27.00	25.75	25.75
Jan.	27.00	27.30	26.00	26.00b
Mar.	27.00	27.90	26.30	26.40
May	27.50	28.50	26.70	27.00

Sales: 16,940,000 lbs.

Open interest at close Wed., Sept. 10th: Sept., 13; Oct., 45; Nov., 755; •Dec., 290; •Jan., 118; •Mar., 398; •May, 35 (•40,000 lb. lots).

FRIDAY, September 12, 1947

Sept.	22.25	22.25	20.00	20.00b
Oct.	22.00	22.00	20.05	20.25b
Nov.	22.10	22.65	20.12½	20.50
Dec.	25.40	26.65	23.75	23.85
Jan.	25.65	26.80	24.00	24.00b
Mar.	26.00	27.00	24.45	24.45ax

Open interest at close Thurs., Sept. 11: Sept., 14; Oct., 44; Nov., 724; •Dec., 307; •Jan., 104; •Mar., 445; •May, 38 (•40,000 lb. lots).

NEW LARD ALLOCATION

The government has approved a greatly increased fourth quarter allocation of fats and oils for export, totaling 452,500,000 lbs., or nearly three times the quota for the same period a year ago, and including substantial increases in the volume of lard to be exported. The increase was credited in part to threat of investigation of the export lard program by the Senate small business committee, and to pressure by NIMPA and other trade groups seeking an end of export controls.

The lard quota totals 74,600,000 lbs., plus amounts for occupation areas, and additional quotas to be announced later for relief areas that will boost the over-all amount to at least 100,000,000 lbs.

PACKERS' WHOLESALE LARD PRICES

Refined lard, tierces, f.o.b. Chgo.	24.00
Kettle rend., tierces, f.o.b. Chgo.	24.25
Leaf, kettle rend, tierces f.o.b. Chgo.	24.50
Neutral, tierces, f.o.b. Chicago	24.50
Standard shortening	•N.25.50-8.25.50
Shortening, tierces, c.a.f. N. & S. Hydrogenated	27.25

WEEK'S LARD PRICES

	Tierces P.S. Lard	Loose P.S. Lard	Leaf Raw
Sept. 8..	19.65n	18.25	17.25n
Sept. 9..	21.50n	19.75b	18.75n
Sept. 10..	21.80n	20.75b	19.75n
Sept. 11..	22.05n	21.50b	20.50n
Sept. 12..	20.50b	21.00n	20.00n

MARKET PRICES *New York*

DRESSED BEEF CARCASSES

City Dressed

	September 10, 1947
Choice, native, heavy	55½@60½
Choice, native, light	52½@59½
Good	51 @58½
Comm.	45 @52½
Can. & cutter	27 @30
Utility	30 @33
Bol. bull	31 @33

BEEF CUTS

	City
No. 1 ribs	76@78
No. 2 ribs	68@70
No. 1 loins	80@85
No. 2 loins	76@78
No. 1 hinds and ribs	60@64
No. 2 hinds and ribs	59@62
No. 3 hinds and ribs	53@57
No. 1 rounds	53@56
No. 2 rounds	53@56
No. 1 chucks	48@51
No. 2 chucks	48@50
No. 3 chucks	45@49
No. 1 briskets	46@50
No. 2 briskets	46@50
No. 1 flanks	19@21
No. 2 flanks	19@21
No. 1 top sirloins	65@67
No. 2 top sirloins	65@67
Rolls, reg. 4@6 lbs. av.	..
Rolls, reg. 6@8 lbs. av.	..

FRESH PORK CUTS

	Western
Shoulders, regular	43@45
Butts, regular 3/8	50@53
Pork loins, fresh, 12 lbs. dn.	62@64
Hams, regular, under 14 lbs.	56@61
Hams, skinned, fresh, under 14 lbs.	60@66
Picnics, fresh, bone in	46@48
Pork trimmings, ex. lean	40@42
Pork trimmings, regular	29@30
Spareribs, medium	42@46
Bellies, sq. cut, seedless, 8/12	56@58

	City
Pork loins, fr., 10/12 lbs.	64@66
Shoulders, regular	45@46
Hams, regular, under 14 lbs.	61@62
Hams, sknd., under 14 lbs.	64@67
Picnics, bone in	46@48
Pork trim, ex. lean	43@47
Pork trim, regular	29@30
Spareribs, medium	44@48
Boston butts, 3/8 lbs.	52@55
Bellies, sq. cut, seedless, 8/12	57@58

FANCY MEATS

Veal breads, under 6 oz.	65
6 to 12 oz.	80
12 oz. up	1.00
Beef kidneys	25
Beef livers	65
Lamb fries	35
Ox tails under ¾ lb.	16
Oxtails over ¾ lb.	25

DRESSED HOGS

Hogs, gd. & ch., bd. on, lf. fat in	
100 to 136 lbs.	40@41¾
137 to 153 lbs.	40@41¾
154 to 171 lbs.	40@41¾
172 to 188 lbs.	40@41¾

LAMBS

Choice lambs	52@55
Good lambs	51@54
Commercial	47@50
Utility	41@45

VEAL—SKIN OFF

	Western
Choice carcass	42@46
Good carcass	38@42
Commercial carcass	36@39
Utility	30@35

CALF

	Western
Choice	42@46
Good	38@40
Commercial	35@39
Utility	30@35

BUTCHERS' FAT

Shop fat	$5.50
Breast fat	7.00
Edible suet	7.50
Inedible suet	7.50

SOYBEAN OIL OUTLETS

At the annual convention of the American Soybean Association in Columbus, O., September 5-6, Dr. Ralph H. Manley, director of research for General Mills, Inc., and chairman of the National Soybean Processors Association's research council, pointed out that when soybean oil is hydrogenated, it is acceptable for production of many types of soap, and that increased use by soapers may be on its way.

Dr. B. F. Daubert, of the University of Pittsburgh's chemistry department, declared one of the largest uses for soybean oil is in the production of margarine.

WESTERN DRESSED MEATS AT NEW YORK

WEDNESDAY, SEPTEMBER 10, 1947

All quotations in dollars per cwt.

FRESH BEEF—STEER & HEIFER:

Choice:

350-500 lbs.	None
500-600 lbs.	$51.50-52.50
600-700 lbs	51.50-52.50
700-800 lbs.	52.50-54.00

Good:

350-500 lbs.	49.00-50.00
500-600 lbs.	49.50-51.00
600-700 lbs.	50.00-51.00
700-800 lbs.	50.00-51.00

Commercial:

350-600 lbs.	41.00-44.00
600-700 lbs.	42.00-46.00

Utility:

350-600 lbs.	None

COW:

Commercial, all wts.	34.00-38.00
Utility, all wts.	30.00-32.00
Cutter, all wts.	None
Canner, all wts.	None

FRESH VEAL AND CALF:

SKIN OFF, CARCASS:

Choice:

80-130 lbs.	43.00-46.00
130-170 lbs.	43.00-46.00

Good:

50- 80 lbs.	40.00-43.00
80-130 lbs.	40.00-43.00
130-170 lbs.	40.00-42.00

Commercial:

50- 80 lbs.	38.00-40.00
80-130 lbs.	38.00-40.00
130-170 lbs.	37.00-40.00
Utility, all wts.	32.00-36.00

FRESH LAMB AND MUTTON:

SPRING LAMB:

Choice:

30-40 lbs.	53.00-54.00
40-45 lbs.	53.00-55.00
45-50 lbs.	53.00-55.00
50-60 lbs.	52.00-54.00

Good:

30-40 lbs.	52.00-54.00
40-45 lbs.	52.00-54.00
45-50 lbs.	52.00-54.00
50-60 lbs.	51.00-53.00
Commercial, all wts.	47.00-50.00
Utility, all wts.	None

MUTTON (EWE), 70 lbs. Dn.:

Good	22.00-24.00
Commercial	20.00-22.00
Utility	18.00-20.00

FRESH PORK CUTS: Loins No. 1 (BLADELESS INCL.):

8-10 lbs.	63.00-65.00
10-12 lbs.	63.00-65.00
12-16 lbs.	60.00-63.00
16-20 lbs.	None

Shoulders, Skinned, N. Y. Style:

8-12 lbs.	None

Butts, Boston Style:

4- 8 lbs.	50.00-52.00

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BY-PRODUCTS—FATS—OILS

TALLOWS AND GREASES

Government approval during the week of a sharply expanded fourth quarter allocation of fats and oils for export had a prompt effect in pushing upward the prices for both lard and tallows and greases.

The export quota totals 452,500,000 lbs., or nearly three times the 176,800,000 lbs. allocated in the same quarter a year ago. Commercial channels will handle 331,700,000 lbs.

While the market for tallows and greases was quiet at the close of last week, larger buyers advanced their bids on Monday to the 14c level for fancy tallow and choice white grease. Offerings, however, were reported very light and late dealer bids on the same day moved to the 15c level. Larger buyers advanced their bids to this level later, but on Thursday active bids from dealers and specialty users pushed prices to the 16c level for fancy tallow and choice white grease.

The fats and oils fourth-quarter export allocation of 452,500,000 lbs. includes 36,300,000 lbs. allocated to export claimants in exchange for other fats and oils needed in this country. The commercial allocations include (in fat content) 33,100,000 lbs. of inedible fats and oils, and 17,100,000 lbs. of soap. In addition, 120,800,000 lbs. of all types of fats and oils are allocated for procurement by USDA's Production and Marketing Administration.

Recipients of U. S. commercial export allocations are expected to be announced soon.

TALLOW.—Closing quotations for tallow in carlots, f.o.b. producer's plant were sharply higher than a week earlier with active inquiry from dealers and specialty users at 16c for fancy. Thursday quotations were as follows:

Edible, 16@16½c; fancy, 16c; choice, 15⅞c; prime or extra, 15¾c; special, 14½@15c; No. 1, 13¼c; No. 3, 12½c; No. 2, 11½c.

GREASES.—The market in greases advanced sharply from a week earlier. Grease quotations on Thursday were reported as follows:

Choice white 16c; A-white, 14½c; B-white, 14c; yellow 13¼c; house, 12½c; brown, 25 F.F.A., 11½c.

GREASE OILS.—Grease oils continued to move regularly and at prices improved 1¾c over a week ago. No. 1 oil was quoted at 20¼c. Prime burning sold at 22¼c, and acidless tallow oil was nominally quoted at 20¼c. All prices quoted are in drum lots.

NEATSFOOT OIL.—Quotations on neatsfoot oil were nominally stronger but the market continues well sold up.

FERTILIZER PRICES

BASIS NEW YORK DELIVERY

Ammoniates

Ammonium sulphate, bulk, per ton, f.o.b. production point	$37.00
Blood, dried 16% per unit of ammonia	7.50
Unground fish scrap, dried, 60% protein nominal f.o.b. Fish Factory, per unit	2.00
Soda nitrate, per net ton, bulk, ex-vessel Atlantic and Gulf ports	38.50
in 100-lb. bags	41.50
Fertilizer tankage, ground, 10% ammonia, 10% B.P.L., bulk	nominal
Feeding tankage, unground, 10-12% ammonia, bulk per unit of ammonia	8.75

Phosphates

Bone meal, steam, 3 and 50 bags, per ton, f.o.b. works	$60.00
Bone meal, raw, 4½% and 50% in bags, per ton, f.o.b. works	67.50
Superphosphate, bulk, f.o.b. Baltimore, 19% per unit	.80

Dry Rendered Tankage

45/50% protein, unground, $2.20 per unit of protein.

EASTERN FERTILIZER MARKET

New York, September 11, 1947

Additional trading was done in wet rendered tankage at $8.75 f.o.b. Eastern shipping points and the market was well cleaned up.

Cracklings continued to sell at $2.20 f.o.b. Eastern shipping points and a number of sales of South American cracklings were made at slightly under this figure.

Fish scrap was stronger because the fishing season is drawing to a close in the North.

BY-PRODUCTS MARKETS

(Chicago, September 11, 1947.)

Blood

	Unit Ammonia
Unground, per unit ammonia	*$8.50@9.00

Digester Feed Tankage Materials

Unground, loose	*$10.50@11.00
Liquid stick, tank cars	3.50n

Packinghouse Feeds

	Carlots, per ton
50% meat and bone scraps, bulk	$125.00
55% meat scraps, bulk	137.50
50% feeding tankage, with bone, bulk	104.65
60% digester tankage, bulk	125.00
80% blood meal, bagged	150.00
65% BPL special steamed bone meal, bagged	65.00@75.00

Bone Meal (Fertilizer Grades)

	Per ton
Steam, ground, 3 & 50	50.00@55.00n
Steam, ground, 2 & 27	50.00@55.00n

Fertilizer Materials

	Per ton
High grade tankage, ground 10@11% ammonia	$6.00 and 10cn
Bone tankage, unground, per ton	50.00n
Hoof meal, per unit ammonia	7.00n

Dry Rendered Tankage

	Per unit Protein
Cake	*$2.20@2.25
Expeller	* 2.20@2.25

Gelatine and Glue Stocks

	Per cwt.
Calf trimmings (limed)	$2.25@2.75
Hide trimmings (green, salted)	1.65@1.75
Sinews and pizzles (green, salted)	1.65@1.75
	Per ton
Cattle jaws, skulls and knuckles	$75.00
Pig skin scraps and trim, per lb	.10

Animal Hair

Winter coil dried, per ton	$80.00@85.00
Summer coil dried, per ton	55.00@60.00
Cattle switches	3¾@5c
Winter processed, gray, lb	12@13c
Summer processed, gray, lb	.7@7½c

*F.O.B. shipping point.

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VEGETABLE OILS

Prices for vegetable oils moved sharply higher on the news of fourth-quarter export allocations totaling 452,500,000 lbs., or nearly treble the 176,800,000 lbs. in the final export allocations for the same quarter a year ago.

The allocations scheduled for commercial shipment include (in fat content) 5,200,000 lbs. of margarine, 100,200,000 lbs. of shortening and other edible oils, 15,500,000 lbs. of drying oils, and 86,000,000 lbs. of peanut oil as peanuts (100,000 tons shelled).

The total fourth-quarter allocation is understood to include 36,300,000 lbs. allocated to export claimants in exchange for other fats and oils needed in the U. S. The U. S. is reported to have received from the International Emergency Food Council an additional coconut oil quota of 35,000 tons, which brings the year's total to 238,000 tons.

Considerable pressure has been exerted in a number of quarters for increased export allocations. David Bruce, assistant secretary of commerce, called off a meeting in Washington September 12 at which interested fats and oils groups had hoped to plead for removal of export controls.

Threat of an investigation by the Senate small business committee is also understood to have contributed to the pressure. Currently such an investigation is reported to have been deferred.

PEANUT OIL.—Thursday's price of 19c nominal, Southeast, was 1c to 1½c higher than a week ago.

CORN OIL.—At 19c nominal, this product was 1c up from a week earlier.

SOYBEAN OIL.—Thursday's price of 18c bid, basis Decatur, was 2½c up from quotations a week ago.

COCONUT OIL.—Thursday's price of 13c nominal Pacific Coast, was ½c up from a week ago.

COTTONSEED OIL.—Thursday spot crude prices at 21c paid across the Belt were up 4½c from the 16½c bid a week earlier. Quotations on the N. Y. futures market for the first four days of the week were reported:

MONDAY, SEPTEMBER 8, 1947

	Open	High	Low	Close	Pr. cl.
Sept.	21.75	21.75	21.75	21.10	21.00
Oct.	20.35	20.35	20.35	20.35	20.35
Dec.	20.20	20.50	19.80	20.05	20.05
Jan., 1948.	20.25	20.25	20.25	20.05	20.05
Mar., 1948.	20.30	20.59	20.00	20.05	20.05
May, 1948.	20.40	20.60	20.00	20.00	20.00

Total sales: 49 contracts.

TUESDAY, SEPTEMBER 9, 1947

Sept.	22.00	23.00	22.00	•23.00	21.00
Oct.	....	....	....	•22.25	20.35
Dec.	20.20	21.60	20.20	•22.05	20.05
Jan., 1948.	....	....	....	•22.05	20.05
Mar., 1948.	20.50	22.00	20.50	•22.05	20.05
May, 1948.	20.50	22.00	20.50	•22.00	20.00

Total sales: 94 contracts.

WEDNESDAY, SEPTEMBER 10, 1947

Sept.	25.00	25.00	25.00	•23.50	23.00
Oct.	....	....	....	•22.75	22.75
Dec.	23.00	25.70	22.40	22.50	22.05
Jan., 1948.	23.45	23.45	23.45	•22.45	22.05
May, 1948.	23.30	24.00	22.50	•22.50	22.00
July, 1948.	22.50	22.50	22.50	•22.40	22.00

Total sales: 122 contracts.

THURSDAY, SEPTEMBER 11, 1947

Sept.	24.00	24.00	24.00	•23.50	23.50
Oct.	....	....	....	•23.00	22.75
Dec.	23.20	23.20	22.80	•22.50	22.50
Jan., 1948.	23.00	23.00	22.80	•22.50	22.45
Mar., 1948.	23.25	23.50	22.65	•22.60	22.60
May, 1948.	23.50	23.60	22.60	•22.60	22.50
July, 1948.	23.00	23.00	22.75	•22.60	22.40

Total sales, 63 contracts.

•Bid.

MARGARINE PRODUCTION

Margarine produced in June, 1947, according to U. S. Treasury:

	June, 1947 lbs.	June, 1946 lbs.
Production of uncolored margarine	38,585,841	31,464,581
Production of colored margarine	2,814,242	4,597,159
Total	41,400,083	36,061,740
Uncolored margarine withdrawn tax paid	37,872,497	33,575,500
Colored margarine withdrawn tax paid	1,776,793	991,805
Total	39,649,290	34,567,565

VEGETABLE OILS

Crude cottonseed oil, carlots, f.o.b. mills	
Valley	21pd
Southeast	21pd
Texas	21pd
Soybean oil, in tanks, f.o.b. mills, Midwest	18b
Corn oil, in tanks, f.o.b. mills	19n
Coconut oil, Pacific Coast	13n
Peanut oil, f.o.b. Southern points	19n
Cottonseed foots	
Midwest and West Coast	3¾
East	3¾

OLEOMARGARINE

Prices f.o.b. Chgo.

White domestic, vegetable	31
White animal fat	33
Milk churned pastry	29
Water churned pastry	28

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HIDES AND SKINS

Packer hides active and stronger—Light cows and extreme light native steers up 2@2½c—Native and branded steers sell up 1½c—Heavy cows and branded cows up 1c—Pacific Coast market active at 2½c advance.

Chicago

PACKER HIDES.—Packer hide market was active and strong this week, exhibiting the same trend as all other commodity markets so far this week. Advances of 2@2½c were paid on light native cows and also extreme light native steers; native and branded steers moved up 1½c; heavy cows and branded cows sold a cent over last week; native bulls moved up ½c at end of last week. Trading did not get under way in the local market until mid-week, but a total of 90,000 hides has been reported so far, in addition to which a fair quantity of branded steers and branded cows is reported to have been booked to tanning accounts. All hides moving were late Aug. and early Sept. take-off.

Hide futures were active and higher at the opening of the week and were reflected in bids around a cent higher than previous week for most descriptions, in part from speculative interests. Bids moved fractionally higher at mid-week and trading got under way. An active inquiry is reported for more hides but some packers booked most of their brands to tanning accounts and have little to offer at the moment.

Trading opened up in native steers when one packer sold 3,700 mixed light and heavy native steers at 30c, or ½c up; later, another packer sold 7,000 more at 30½c, or a cent over last week.

One local packer sold 600, and the Association 1,000 extreme light native steers at 32½c, or 2½c over last week's bid price, and 3c over last actual sales.

Early trading in branded steers was at 1¼c advance, with another ¼c added later. One packer sold 2,300 butt branded steers at 28¾c; two lots totalling 2,100 Colorados sold early at 28¼c; 900 heavy and light Texas steers sold at 28¾c. Later, one packer sold a total of 3,500 branded steers, butt brands going at 29c, and Colorados at 28½c; heavy and light Texas steers are quotable at 29c at the moment. Extreme light Texas steers are quoted 28½@29c in a nominal way, without offerings.

Heavy native cows sold at a cent advance, three local packers and an outside packer moving a total of 6,700 current take-off at 30c.

Light native cows sold at the usual variety of prices, depending upon average weight and points, with the quotable range for usual class of offerings at present 30½@31c, or 2@2½c over last week. An outside packer sold 1,800 northern light cows late last week at 29c, and another outside car of northerns sold early this week at 30c, signalling the advance. On later trading, local packers sold 5,400 northern light native cows at 30½c; 4,300 Kansas City and similar points at 31c; 1,500 Okla. City very light average at 32c; two packers sold 9,100 northerns at 30½c; 8,000 more moved at 31c for light average and 31½c for extreme light average points; one packer sold 9,000 light cows in range of 30½c, 31c and 31½c, according to points; the Association sold 1,800 Chgo. light average at 31c.

There is active inquiry for branded cows at the advance, bookings to tanning accounts having removed some potential offerings; three packers sold a total of 16,800 branded cows at 28c for regular points; 4,200 more Okla. City take-off sold at 28½c.

Late last week, one packer sold a car of bulls at ½c advance, native bulls going at 19c and brands at 18c; an earlier sale of a small lot of light average native bulls at 20c was also disclosed.

Federally inspected slaughter of cattle during August declined to 1,216,668 head, as compared with 1,274,273 in July, and 1,239,904 in August 1946; total for first eight months this year was 9,937,831 head, as against 7,251,118 for same time 1946. Calf slaughter during August totalled 627,749 head, as against 656,182 for July, and 533,750 for August 1946; total for first eight months this year 4,965,831, as against 3,568,797 for same time 1946.

OUTSIDE SMALL PACKER.—The action in the packer market over-shadowed the outside markets so far this week but an active inquiry is reported for small packer stock. One lot of 42-lb. avge. midwest stock moved early at 29c for native steers and cows, with brands a cent less; some 50-lb. avge. stock was quoted around 25c for natives, and market in general quoted in this range, depending upon average weight.

PACIFIC COAST.—The Coast market also moved higher this week. There was trading by the larger packers at 26½c, flat, for steers and cows, and later small packers sold also at the same figure; quantities were not disclosed but a fair volume of business reported to be involved.

CALF AND KIPSKINS.—There has been no action apparent so far this week on packer calf or kipskins, but a good inquiry is reported for light skins, with intimations that firm prices are obtainable. Late last week, one packer sold 4,000, another 8,000, and a third packer 3,500 Sept. River point calf, the lights under 9½ lb. going steady at 85c; heavies, 9½/15 lb., sold at 65c, or 10c down from Aug. sales. Northern calf last sold at 90c for lights and 80c for heavies.

Packer kipskins were active late last week at steady prices. One packer

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moved Sept. production, estimated at 20,000 or more kips; natives sold at 45c for northerns and 42½c for southerns; over-weights sold at 40c for northerns and 37½c for southerns; brands moved at 2½c discount in each instance. Another packer moved 10,000 Sept. southern kipskins same basis.

Packer regular slunks sold late last week at $3.40, steady price; this week, one packer sold 2,000 Sept. take-off at $3.65, or 25c up. Hairless slunks quoted 90@1.00 flat, nom.

SHEEPSKINS.—Production of packer shearlings is currently light, with demand far in excess of production, and offerings comparatively scarce. No. 1's are reported salable at $2.50@2.60, No. 2's at $1.25@1.50, and No. 3's around $1.00; higher prices are indicated obtainable for No. 1's in some quarters, while the two lower grades are about out of the picture. Fall clips are moving in a small way at $3.30@3.50, with a good inquiry. Pickled skins are called strong and quoted $16.00@18.00 per doz. packer production. Packer wool pelts have been quoted around $3.25@3.40 per cwt. liveweight basis for spring lambs, with production running well to natives; two midwest packers sold at midweek on bids and, while no details have come to light as yet, sales around $3.50 per cwt. or better are credited in some quarters.

N. Y. HIDE FUTURES

MONDAY, SEPTEMBER 8, 1947

	Open	High	Low	Close
Sept.	27.75b	....	....	28.45b
Dec.	25.65	25.65	25.10	25.25b
Mar.	22.50	22.60	22.30	22.30
June	21.15b	21.30	21.15	21.15

Closing 35 higher to 35 lower; Sales 37 lots.

TUESDAY, SEPTEMBER 9, 1947

Sept.	28.00b	29.50	29.00	29.47
Dec.	25.25	26.50	25.25	26.40b
Mar.	22.40	23.00	22.40	23.00
June	21.20b	21.87	21.70	21.80b

Closing 60 to 1.15 higher; Sales 114 lots.

WEDNESDAY, SEPTEMBER 10, 1947

Sept.	29.30b	30.20	30.00	29.65a
Dec.	26.80	27.10	26.65	26.70b
Mar.	23.40	24.02	23.40	23.77b
June	22.00b	22.78	22.55	22.61b

Closing 18 to 81 higher; Sales 138 lots.

THURSDAY, SEPTEMBER 11, 1947

Sept.	29.25b	29.80	29.80	29.60b
Dec.	26.80	26.80	26.35	26.35b
Mar.	23.55b	24.05	23.80	23.90b
June	22.35b	22.81	22.45	22.60b

Closing 35 lower to 23 higher; Sales 80 lots.

CHICAGO HIDE MOVEMENT

Receipts of hides at Chicago for the week ended September 6, 1947, were 5,622,000 lbs.; previous week, 5,504,000 lbs.; for the corresponding week last year 4,173,000 lbs., January 1 to date 257,358,000 lbs., compared with 237,462,000 lbs. in the same period a year earlier.

Shipments of hides from Chicago for the week ended September 6, 1947, were 4,457,000 lbs.; previous week 5,703,000 lbs.; same week last year, 4,429,000 lbs.; January 1 to date 311,888,000 lbs., compared with 158,008,000 lbs. for the same period a year ago.

CHICAGO HIDE QUOTATIONS

PACKER HIDES

	Week ended Sept. 11, '47		Previous Week		Cor. week, 1946
Hvy. nat. strs.	@30½		@29		@15½
Hvy. Tex. strs.	@29		@27½		@14½
Hvy. butt brnd'd strs...	@29		@27½		@14½
Hvy. Col. strs.	@28½		@27		@14
Ex-light Tex. strs.	28½@29n		@27½n		@15
Brnd'd cows	28 @28½	27	@27½		@14½
Hvy. nat. cows.	@30		@29		@15½
Lt. nat. cows.	30½@31	28	@29		@15½
Nat. bulls	@19		@18½		@12
Brnd'd bulls	@18		@17½		@11
Calfskins, Nor.	80 @90	80	@90		23½@27
Kips, Nor. nat.	@45		@45		@20
Kips, Nor. brnd.	@42½		@42½		@17½
Slunks, reg.	@3.65		@3.40		@1.10
Slunks, hrls.	95 @1.00	95	@1.00		@55

CITY AND OUTSIDE SMALL PACKERS

Nat. all-wts.	25 @29	23	@27		@15
Brnd'd all wts.	24 @28	22	@26		@14
Nat. bulls	16 @16½	16	@16½		@11½
Brnd'd bulls	15 @15½	15	@15½		@10½
Calfskins	60 @65	60	@65	20½	@23
Kips, nat.	@35		@35		@18
Slunks, reg.	3.40@3.50		@3.25		@1.10
Slunks, hrls.	90 @95		@95		@55

All packer hides and all calf and kipskins quoted on trimmed, selected basis; small packer hides quoted selected, trimmed; all slunks quoted flat.

COUNTRY HIDES

Hvy. strs.	22 @24	21	@23		@15
Hvy. cows	22 @24	21	@23		@15
Buffs	22 @24	21	@23		@15
Extremes	22 @24	21	@23		@15
Bulls	14 @14½	13½	@14		@11½
Calfskins	42 @45	42	@45	16	@18
Kipskins	26 @27	26	@27		@16
Horsehides	8.50@9.25	8.50	@9.25	6.50	@8.00

All country hides and skins quoted on flat trimmed basis.

SHEEPSKINS

Pkr. shearlgs.	2.50@2.60	2.50@2.60		@2.15
Dry pelts	@27	@27	26	@27

Meat contains most of the minerals needed for good nutrition.

GRAIN AND HOGS REACH ALL-TIME HIGH LEVELS

This week hog and grain markets skyrocketed upward with No. 3 yellow cash corn reaching $2.64½ to $2.66 a bushel, highest price in history, on Thursday at Chicago, and the September future hitting $2.63¼, although it declined later to close at $2.56 to $2.57. Hogs reached an all-time high of $30.50.

The general buying enthusiasm affecting the grain markets appeared to be stirred up by a Washington story stating that some officials in charge of the export grain program were resigned to $4.00 per bushel wheat. However, the biggest influence was the September 10 crop report, which gave the gloomy promise of another 33,000,000 bu. cut in the corn crop since mid-August.

The September 1 estimate forecast a total crop of only 2,403,913,000 bu., the lowest since 1936. The report also indicated a 19,000,000 bu. decline in the total wheat crop to 1,408,602,000 bu., although this is still a record.

CHICAGO PROV. SHIPMENTS

Provision shipments from Chicago for the week ended September 6, 1947:

	Week Sept. 6	Previous week	Cor. wk. 1946
Cured meats, pounds	16,324,000	26,671,000	10,251,000
Fresh meats, pounds	28,022,000	30,328,000	27,861,000
Lard, pounds	6,935,000	6,881,000	4,335,000

LIVESTOCK MARKETS *Weekly Review*

Fewer Cattle, Hogs, and Sheep Killed in August than Same Period in 1946

AUGUST slaughter of cattle, for the first month this year, showed a smaller total than in the corresponding month of 1946, but calf slaughter in August was the largest for that month since 1944. Slaughter of hogs fell a little below August 1946, but was substantially above August 1945, while slaughter of sheep and lambs was the lowest for August since 1928.

Slaughter of cattle under federal inspection during August totaled 1,216,668 head. This was 5 per cent less than the 1,274,273 in the preceding month, and 2 per cent less than the 1,239,904 in August 1946, although it was 2 per cent above the five-year (1942-1946) average of 1,192,483. Slaughter of cattle for the first eight months this year totaled 9,937,831 head—37 per cent above the 7,251,118 slaughtered in the same period in 1946 and 25 per cent over the five-year average.

Calf slaughter in August totaled 627,749 head, the largest for August since 1944, and the second largest on record. This figure was 4 per cent less than the total of 656,182 reported for the month before, 18 per cent more than the 533,750 slaughtered in August 1946, and 13 per cent over the five-year August average.

August slaughter of hogs totaled 2,731,363 head. This was 4 per cent below the 2,842,856 killed in August 1946. Also, it was 21 per cent below the 3,454,634 slaughtered in July 1947 and 19 per cent less than the five-year August average. However, it was 9 per cent over the ten-year period 1930-1939. Total slaughter of hogs for the January-August period was 30,433,840 head, 1 per cent above the 30,273,940 slaughtered in the same period last year and 16 per cent below the five-year average.

Slaughter of sheep and lambs in August totaled 1,253,039 head. This followed the current trend toward lower figures for these animals because of the smaller numbers on farms and in feed lots. It was 21 per cent less than the 1,578,043 killed in August last year, 2 per cent less than the 1,280,181 slaughtered in July this year, and 32 per cent below the five-year average.

FEDERALLY INSPECTED SLAUGHTER

	Cattle 1947	Cattle 1946
January	1,403,139	1,011,680
February	1,142,546	1,014,598
March	1,227,735	903,712
April	1,203,137	714,860
May	1,263,755	676,415
June	1,206,578	450,970
July	1,274,273	1,238,979
August	1,216,668	1,239,904
September		359,584
October		1,102,882
November		1,347,679
December		1,352,062

	Calves 1947	Calves 1946
January	590,859	440,175
February	521,435	426,756
March	643,962	484,259
April	678,440	445,049
May	626,508	402,271
June	620,696	294,157
July	656,182	542,380
August	627,749	533,750
September		363,874
October		650,667
November		655,986
December		590,768

	Hogs 1947	Hogs 1946
January	5,844,391	4,911,073
February	3,896,928	4,698,483
March	3,405,885	3,635,521
April	3,615,746	3,857,972
May	3,831,450	4,149,005
June	3,653,443	2,316,340
July	3,454,634	3,862,690
August	2,731,363	2,842,856
September		438,057
October		3,114,457
November		5,434,088
December		5,133,378

	Sheep 1947	Sheep 1946
January	1,541,717	1,439,954
February	1,270,918	2,196,064
March	1,237,468	1,978,282
April	1,321,589	1,735,882
May	1,355,065	1,373,744
June	1,329,034	1,677,837
July	1,280,181	1,737,881
August	1,253,039	1,578,043
September		1,300,018
October		2,005,256
November		1,528,542
December		1,345,905

Livestock slaughter under federal inspection during August, 1947, by stations,[1] with comparative totals, is reported by the USDA as follows:

	Cattle	Calves	Hogs	Sheep and Lambs
NORTH ATLANTIC				
New York, Newark, Jersey City	31,254	47,354	105,860	168,400
Baltimore, Phila.	23,790	8,877	64,849	8,847
NORTH CENTRAL				
Cinti., Cleve., Indpls.	59,683	19,080	168,218	37,563
Chicago, Elburn	104,027	51,623	221,736	89,293
St. Paul-Wis. group[2]	105,010	57,874	257,489	62,898
St. Louis area[3]	73,042	70,686	173,713	75,280
Sioux City	37,869	1,562	82,691	37,376
Omaha	82,944	9,039	131,941	80,306
Kansas City	95,302	39,817	116,328	81,032
Iowa & S. Minn.[4]	73,338	21,879	473,077	156,911
SOUTH-EAST[5]	36,508	24,174	38,764	94
S. CENT. WEST[6]	108,936	63,160	137,293	135,541
ROCKY MOUNTAIN[7]	28,081	5,441	37,260	38,373
PACIFIC[8]	77,301	17,898	86,264	129,315
Total 32 centers	937,085	438,464	2,095,483	1,101,229
All other stations	279,583	189,285	635,880	151,810
Total, Aug.	1,216,668	627,749	2,731,363	1,253,039
Total, July	1,274,273	656,182	3,454,634	1,280,181
Av. Aug. 5-yr. (1942-46)	1,192,483	557,452	3,376,262	1,535,612
Total, Jan.-Aug.	9,937,831	4,965,831	30,433,840	10,589,011
Jan.-Aug. 5-yr. av.	7,927,205	3,766,241	36,254,447	13,555,451

[1]Excludes slaughter in Hawaii and Virgin Islands beginning January 1947. [2]Includes St. Paul, S. St. Paul, Newport, Minn., and Madison, Milwaukee, Green Bay, Wis. [3]Includes St. Louis National Stock Yards, E. St. Louis, Ill., and St. Louis, Mo. [4]Includes Cedar Rapids, Des Moines, Fort Dodge, Mason City, Marshalltown, Ottumwa, Storm Lake, Waterloo, Iowa and Albert Lea, Austin, Minn. [5]Includes Birmingham, Dothan, Montgomery, Ala., Tallahassee, Fla., and Albany, Atlanta, Columbus, Moultrie, Thomasville, Tifton, Ga. [6]Includes S. St. Joseph, Mo., Wichita, Kans., Oklahoma City, Okla., and Fort Worth, Tex. [7]Includes Denver, Colo., and Ogden, Salt Lake City, Utah. [8]Includes Los Angeles, Vernon, San Francisco, San Jose, Sacramento, Vallejo, Calif.

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LIVESTOCK PRICES AT LEADING MARKETS

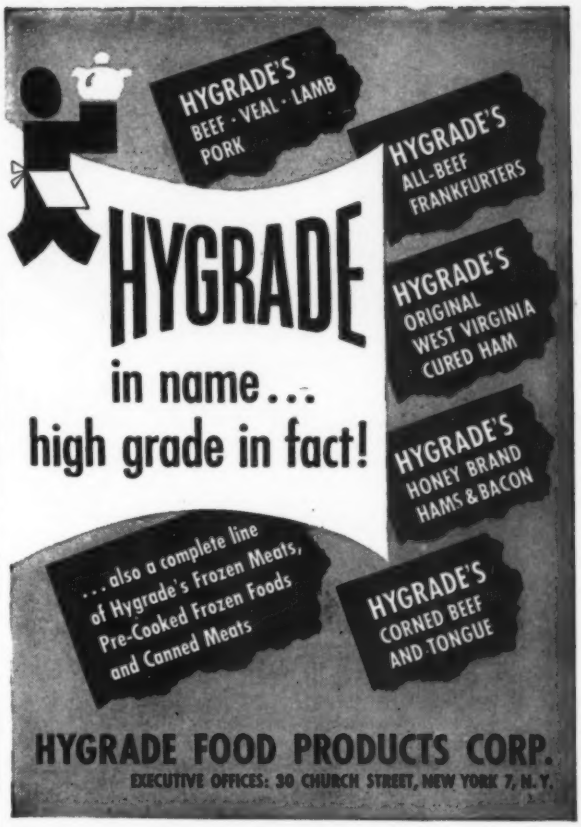
Livestock prices at five western markets on Wednesday, September 10, 1947, reported by the Production & Marketing Administration:

HOGS: (Quotations based on hard hogs)	St. L. Natl. Stk. Yds.	Chicago	Kansas City	Omaha	St. Paul
BARROWS AND GILTS:					
Good and Choice:					
120-140 lbs.	$24.00-26.25	$24.00 26.50	$.....	$.....	$.....
140-160 lbs.	26.00-28.50	26.00-28.50	26.50-28.25	28.50-29.50	28.00-28.50
160-180 lbs.	27.75-29.50	27.50-29.25	27.75-30.00	29.50-30.50	28.50-30.00
180-200 lbs.	29.50-29.75	29.00-29.50	29.75-30.25	30.00-30.50	30.00-30.50
200-220 lbs.	29.50-29.75	29.25-29.60	30.00-30.25	30.00-30.75	30.50 only
220-240 lbs.	29.50-29.75	29.25-29.75	30.00-30.25	30.00-30.75	30.50 only
240-270 lbs.	28.75-29.75	28.75-29.60	29.50-30.25	29.50-30.25	29.25-30.50
270-300 lbs.	27.25-29.25	28.00-29.00	28.75-29.75	28.50-29.75	28.00-29.50
300-330 lbs.	26.50-27.75	27.00-28.25	28.25-29.25	28.00-29.25	27.75-28.25
330-360 lbs.	25.75-27.00	26.00-27.25	27.50-28.50	27.00-28.25	27.00-27.75
Medium:					
160-220 lbs.	26.00-29.25	25.50-29.00	27.00-29.50	27.00-30.00	27.50-28.25
SOWS:					
Good and Choice:					
270-300 lbs.	25.50-26.00	25.75-26.50	27.00-27.25	27.00-27.50	27.00-27.25
300-330 lbs.	25.50-26.00	25.50-26.25	27.00-27.25	27.00-27.50	27.00-27.25
330-360 lbs.	25.50-26.00	24.75-26.00	26.50-27.25	26.75-27.50	26.50-27.00
360-400 lbs.	25.00-25.50	24.00-25.25	26.00-27.00	26.50-27.25	26.00-26.50
Good:					
400-450 lbs.	24.00-25.50	23.00-24.50	24.00-26.50	25.75-26.75	25.50-26.00
450-550 lbs.	22.00-24.50	21.00-23.50	23.00-25.50	25.00-26.00	25.00-25.50
Medium:					
250-550 lbs.	20.00-26.00	19.00-25.50	22.00-26.00	24.00-27.00	24.50-24.75
PIGS (Slaughter):					
Medium and Good:					
90-120 lbs.	19.00-24.25	20.00-24.50	.....	.....	.....
SLAUGHTER CATTLE, VEALERS AND CALVES:					
STEERS, Choice:					
700- 900 lbs.	29.50-33.00	29.50-33.50	29.50-32.25	29.00-32.00	29.25-32.00
900-1100 lbs.	30.50-33.50	32.00-35.00	30.75-34.00	29.75-33.50	29.75-33.50
1100-1300 lbs.	31.00-34.50	33.50-35.25	31.50-34.25	31.00-34.50	30.25-34.50
1300-1500 lbs.	31.00-34.50	34.00-35.25	31.75-34.25	31.00-34.50	30.25-34.75
STEERS, Good:					
700- 900 lbs.	25.00-30.00	24.50-29.50	24.75-30.75	25.00-29.25	25.50-29.75
900-1100 lbs.	25.50-30.50	26.00-32.00	25.75-31.50	25.25-31.00	25.50-30.25
1100-1300 lbs.	26.00-30.50	27.50-33.50	26.75-31.75	25.50-31.00	26.00-30.25
1300-1500 lbs.	26.50-31.00	29.00-34.00	27.50-31.75	26.00-31.00	26.00-30.25
STEERS, Medium:					
700-1100 lbs.	18.00-25.00	18.00-25.00	19.00-26.50	18.50-25.50	18.75-26.00
1100-1300 lbs.	19.00-26.00	19.00-25.50	20.50-27.00	21.50-26.00	18.75-26.00
STEERS, Common:					
700-1100 lbs.	16.00-19.00	16.50-19.00	16.00-19.00	16.75-20.00	14.50-18.75
HEIFERS, Choice:					
600- 800 lbs.	29.00-32.50	28.00-30.50	28.00-31.25	27.75-30.00	28.25-30.00
800-1000 lbs.	29.00-33.00	29.00-31.50	29.00-32.00	28.25-31.00	28.75-31.00
HEIFERS, Good:					
600- 800 lbs.	25.00-29.00	24.50-28.50	23.50-28.00	24.75-28.25	24.75-28.75
800-1000 lbs.	25.50-29.00	25.50-29.00	24.00-29.00	25.00-28.25	24.75-28.75
HEIFERS, Medium:					
500- 900 lbs.	17.50-24.50	18.00-24.50	16.25-24.00	17.00-25.00	17.75-24.75
HEIFERS, Common:					
500- 900 lbs.	14.00-17.50	15.00-18.00	14.00-16.25	14.00-17.00	14.00-17.75
COWS (All Weights):					
Good	17.00-19.50	18.50-22.00	16.25-20.00	17.00-20.50	17.25-20.50
Medium	14.50-17.00	15.00-18.50	14.50-16.25	14.50-17.00	14.50-17.25
Cut. & com.	12.00-14.50	12.00-15.00	12.25-14.50	12.50-14.50	12.25-14.50
Canners	10.00-12.00	11.00-12.00	10.50-12.25	11.25-12.50	11.25-12.25
BULLS (Yrls. Excl.), All Weights:					
Beef, good	17.50-18.25	18.50-19.50	17.25-18.00	17.50-18.00	18.25-19.00
Sausage, good	17.00-17.50	18.00-19.50	17.00-18.00	17.25-17.75	18.00-18.75
Sausage, medium.	15.00-17.00	16.00-18.00	15.00-17.00	16.25-17.25	16.75-18.00
Sausage, cut. & com.	12.00-15.00	13.00-16.00	12.00-15.00	14.50-16.25	13.75-16.75
VEALERS (All Weights):					
Good & choice	23.50-28.50	24.00-26.00	21.00-23.00	18.50-20.00	23.00-28.00
Com. & med.	13.00-23.50	15.00-24.00	12.00-21.00	12.00-18.50	14.00-23.00
Cull (75 lbs. up)	8.00-13.00	13.00-15.00	8.00-12.00	10.00-12.00	11.00-14.00
CALVES (500 lbs. Down):					
Good & choice	19.00-23.50	16.00-19.50	18.50-23.00	18.00-20.00	20.00-23.00
Com. & med.	13.00-19.00	12.00-16.00	12.00-18.50	12.00-18.00	14.00-20.00
Cull	9.00-13.00	11.00-12.00	8.50-12.00	10.00-12.00	11.00-14.00
SLAUGHTER LAMBS AND SHEEP:[1]					
LAMBS (Spring):					
Good & choice*	24.75-25.75	25.00-25.50	24.50-25.65	24.75-25.75	25.00-25.25
Medium & good*	21.00-24.50	20.00-24.75	21.00-24.25	20.00-24.50	20.75-24.75
Common	16.00-20.00	17.00-19.50	17.50-20.75	16.50-19.00	17.00-20.25
YRLG. WETHERS:[2]					
Good & choice*	20.50-21.50	21.00-22.00	19.00-19.75	.....	.....
Medium & good*	18.50-20.50	18.00-20.75	16.50-18.75	.....	.....
EWES:[2]					
Good & choice*	7.50- 8.50	8.75- 9.50	7.75- 8.25	8.00- 8.50	8.25- 9.00
Com. & med.	6.50- 7.25	7.00- 8.50	6.00- 7.50	6.50- 8.00	6.25- 8.00

[1]Quotations on wooled stock based on animals of current seasonal market weight and wool growth, those on shorn stock on animals with No. 1 and 2 pelts.

[2]Quotations on slaughter lambs and yearlings of Good and Choice grades and the Medium and Good grades and on ewes of Good and Choice grades as combined represent lots averaging within the top half of the Good and the top half of the Medium grades, respectively.

[3]Quotations on shorn basis.



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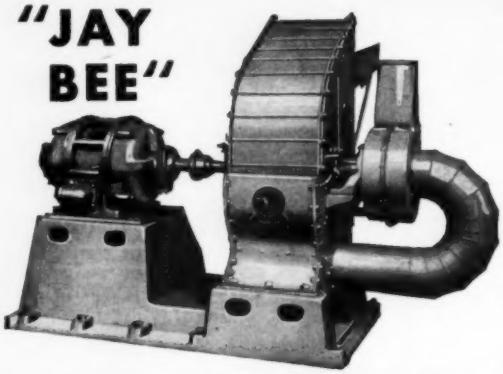

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SLAUGHTER REPORTS

Special reports to THE NATIONAL PROVISIONER showing the number of livestock slaughtered at 13 centers for the week ended September 6, 1947.

CATTLE

	Week ended Sept. 6	Prev. week	Cor. week, 1946
Chicago‡	22,103	23,951	1,027
Kansas City‡	35,905	27,445	†2,218
Omaha*‡	24,246	17,115	†2,500
E. St. Louis‡	13,070	13,229	...
St. Joseph‡	12,628	9,840	636
Sioux City‡	11,781	7,384	†802
Wichita*‡	3,762	4,093	776
New York & Jersey City†	7,759	7,102	2,648
Okla. City*‡	12,240	9,700	2,125
Cincinnati§	6,029	5,627	66
Denver‡	7,519	876	1,865
St. Paul‡	13,842	13,986	3,391
Milwaukee‡	3,733	3,671	1,590
Total	174,617	144,019	19,644

HOGS

Chicago‡	25,820	57,549	1,914
Kansas City‡	8,801	7,945	†2,947
Omaha‡	20,562	21,088	†5,815
E. St. Louis‡	20,610	22,250	1,517
St. Joseph‡	12,277	13,547	664
Sioux City‡	10,524	12,718	†2,955
Wichita‡	1,506	1,605	302
New York & Jersey City†	23,552	24,664	19,334
Okla. City‡	5,470	5,408	742
Cincinnati§	12,454	14,369	230
Denver‡	6,311	8,417	2,003
St. Paul‡	17,301	17,751	1,506
Milwaukee‡	3,264	3,236	660
Total	168,452	210,487	40,589

SHEEP

Chicago‡	6,366	19,982	3,296
Kansas City‡	8,632	13,966	†10,415
Omaha‡	12,813	14,329	†9,400
E. St. Louis‡	9,759	8,367	...
St. Joseph‡	8,946	9,285	2,623
Sioux City‡	5,654	6,536	†3,576
Wichita‡	1,220	1,551	870
New York & Jersey City†	32,523	38,579	33,157
Okla. City‡	5,573	7,600	366
Cincinnati§	140	1,219	998
Denver‡	11,108	11,594	9,651
St. Paul‡	11,357	12,014	4,133
Milwaukee‡	1,123	817	934
Total	115,214	145,839	79,419

*Cattle and calves.

†Federally inspected slaughter, including directs.

‡Stockyards sales for local slaughter.

§Stockyards receipts for local slaughter, including directs.

BALTIMORE LIVESTOCK

Livestock prices at the Baltimore, Md., market on September 9, 1947:

CATTLE:

Steers, gd.	$26.50@29.00
Steers, med.	20.00@26.00
Bulls, sausage	15.00@19.00
Cows, com. & med.	14.00@17.00
Cows, cut. & can.	11.50@14.00

CALVES:

Vealers, gd. to ch.	$21.00@25.00
Com. to med.	13.00@20.00
Cull to com.	9.00@11.00

HOGS:

Gd. & ch.	$27.75@29.75

LAMBS:

Gd. & ch.	$24.00@25.00

NEW YORK RECEIPTS

Receipts of salable livestock at Jersey City and 41st st., New York market, for week ended September 6, 1947:

	Cattle	Calves	Hogs*	Sheep
Salable	261	1,945	595	1,086
Total (incl. directs)	3,996	6,467	13,165	19,373
Previous week:				
Salable	374	2,004	600	1,274
Total (incl. directs)	3,712	8,164	14,528	30,646

*Including hogs at 31st street.

CORN BELT DIRECT TRADING

(Reported by Office of Production & Marketing Administration.)

Des Moines, Ia., September 11.—At the 10 concentration yards and 11 packing plants in Iowa and Minnesota through the first four days this week barrows and gilts under 240 lbs. sold $1.50 to $2.25 higher; while heavier weights sold $1.75 to $2.50 and, in instances, $3.00 higher, and sows sold $1.50 to $3.00 higher. Quotations Thursday ranged as follows:

Hogs, good to choice:

160-180 lb.	$26.00@30.25
180-240 lb.	29.00@31.00
240-330 lb.	27.35@30.75
300-360 lb.	26.35@29.75

Sows:

270-330 lb.	$25.75@28.00
400-550 lb.	22.50@26.50

Receipts of hogs at Corn Belt markets for the week ended September 11 were:

	This week	Same day last wk.
Sept. 5	18,500	16,700
Sept. 6	16,500	17,700
Sept. 8	20,500	Holiday
Sept. 9	14,800	19,500
Sept. 10	19,800	21,500
Sept. 11	20,600	21,200

LIVESTOCK RECEIPTS

Receipts at major livestock markets were as follows:

AT 20 MARKETS,

WEEK ENDED:	Cattle	Hogs	Sheep
Sept. 6	292,000	258,000	184,000
Aug. 30	260,000	289,000	180,000
1946	104,000	33,000	196,000
1945	315,000	197,000	298,000
1944	388,000	328,000	400,000

AT 11 MARKETS,

WEEK ENDED:	Hogs
Sept. 6	210,000
Aug. 30	232,000
1946	21,000
1945	162,000
1944	260,000

AT 7 MARKETS,

WEEK ENDED:	Cattle	Hogs	Sheep
Sept. 6	212,000	171,000	115,000
Aug. 30	176,000	196,000	118,000
1946	67,000	16,000	114,000
1945	224,000	135,000	186,000
1944	246,000	206,000	240,000

CANADIAN KILL

Inspected slaughter in Canada for week ended August 30 as reported by the Dominion Department of Agriculture:

CATTLE

	Week Ended Aug. 30	Same Week Last Year
Western Canada	14,979	27,452
Eastern Canada	11,434	14,772
Total	26,413	42,224

HOGS

Western Canada	11,442	16,922
Eastern Canada	35,558	33,347
Total	47,000	50,269

SHEEP

Western Canada	13,387	27,153
Eastern Canada	17,262	32,234
Total	30,649	59,387

PACKERS' PURCHASES

Purchases of livestock by packers at principal centers for the week ending Saturday, September 6, 1947, as reported to THE NATIONAL PROVISIONER:

CHICAGO

Armour, 1,105 hogs; Swift, 1,698 hogs; Wilson, 1,512 hogs; Agar, 4,833 hogs; Shippers, 3,424 hogs; Others, 16,672 hogs.

Total: 22,103 cattle; 2,950 calves; 29,244 hogs; 6,366 sheep.

KANSAS CITY

	Cattle	Calves	Hogs	Sheep
Armour	4,715	948	1,362	1,936
Cudahy	3,745	1,258	1,297	1,219
Swift	4,416	1,602	1,478	2,929
Wilson	3,767	1,564	807	2,430
Central	930	...	...	...
U.S.P.	1,426	...	...	...
Others	11,112	422	3,857	118
Totals	30,111	5,794	8,801	8,632

OMAHA

	Cattle & Calves	Hogs	Sheep
Armour	6,688	2,915	2,673
Cudahy	4,378	2,146	1,862
Swift	5,456	2,494	4,455
Wilson	2,923	1,714	...
Independent	...	1,155	...
Others	...	7,944	...

Cattle and calves: Eagle, 8; Greater Omaha, 125; Hoffman, 100; Rothschild, 507; Roth, 332; Kingan, 1,202; Merchants, 82.

Totals: 21,801 cattle and calves, 18,368 hogs and 8,990 sheep and lambs.

E. ST. LOUIS

	Cattle	Calves	Hogs	Sheep
Armour	4,488	2,515	5,346	4,411
Swift	4,638	3,137	4,644	3,862
Hunter	1,205	...	3,242	209
Hell	...	...	824	...
Krey	...	...	1,377	...
Laclede	...	...	1,290	...
Sieloff	...	...	696	...
Others	2,839	366	3,391	1,277
Shippers	8,583	2,613	10,663	233
Totals	21,653	8,531	31,273	10,092

ST. JOSEPH

	Cattle	Calves	Hogs	Sheep
Swift	3,960	951	6,213	4,714
Armour	4,460	1,129	5,154	1,889
Others	3,820	404	2,020	2,787
Totals	12,240	2,484	13,387	9,370

Does not include 159 cattle, 517 hogs and 2,363 sheep bought direct.

SIOUX CITY

	Cattle	Calves	Hogs	Sheep
Cudahy	3,705	107	3,801	2,332
Armour	4,418	67	4,672	2,296
Swift	3,103	211	2,051	1,026
Others	329	...	...	...
Shippers	14,334	90	7,645	3,042
Totals	25,889	475	18,169	8,696

WICHITA

	Cattle	Calves	Hogs	Sheep
Cudahy	1,126	1,293	1,147	1,220
Guggenheim	425	...	...	...
Dunn-Ostertag	143	...	...	...
Dold	117	...	324	...
Sunflower	35	...	35	...
Pioneer	...	...	...	...
Excel	623	...	...	...
Others	2,506	...	499	359
Totals	4,975	1,293	2,005	1,579

CINCINNATI

	Cattle	Calves	Hogs	Sheep
Gall's	...	...	...	445
Ideal	...	...	610	...
Kahn's	...	...	...	...
Lorey	...	...	375	...
Meyer	...	...	...	...
Schlachter	181	110	...	32
Schroth	141	13	1,469	...
National	355	...	...	...
Others	3,290	850	6,562	2,099
Totals	3,967	973	9,016	2,568

Not including 1,457 cattle, 11 calves, and 5,788 hogs bought direct.

DENVER

	Cattle	Calves	Hogs	Sheep
Armour	1,273	203	2,001	8,818
Swift	1,320	425	1,355	6,680
Cudahy	930	172	1,641	1,798
Others	3,031	298	1,322	2,812
Totals	6,563	1,098	6,319	20,108

OKLAHOMA CITY

	Cattle	Calves	Hogs	Sheep
Armour	4,191	1,279	740	557
Wilson	3,607	1,685	723	327
Others	257	1	592	...
Totals	8,055	2,965	2,055	884

Not including 472 cattle, 748 calves, 3,415 hogs and 4,689 sheep bought direct.

ST. PAUL

	Cattle	Calves	Hogs	Sheep
Armour	5,002	2,031	7,190	4,594
Bartusch	668	...	...	...
Cudahy	1,174	1,248	...	869
Rifkin	795	...	...	...
Swift	4,412	2,276	10,111	5,894
Superior	1,791	...	...	...
Others	2,751	915	3,600	4,846
Totals	16,593	6,470	20,901	16,203

FORT WORTH

	Cattle	Calves	Hogs	Sheep
Armour	1,948	3,732	669	4,446
Swift	1,791	2,802	982	5,921
Blue Bonnet	809	84	68	...
City	527	...	113	...
Rosenthal	208	163	...	56
Totals	5,274	6,781	1,832	10,423

TOTAL PACKER PURCHASES

	Week ended Sept. 6	Prev. week	Cor. week, 1946
Cattle	179,696	155,016	27,004
Hogs	164,785	175,677	11,819
Sheep	108,600	108,197	60,250

CHICAGO LIVESTOCK

Supplies of livestock at the Chicago Union Stockyards for current and comparative periods:

RECEIPTS

	Cattle	Calves	Hogs	Sheep
Sept. 4	5,627	840	12,985	3,924
Sept. 5	2,116	242	8,075	2,363
Sept. 6	740	51	2,185	679
Sept. 8	18,330	1,321	8,095	3,451
Sept. 9	9,170	901	9,821	4,260
Sept. 10	10,781	998	10,713	4,501
Sept. 11	5,300	900	8,000	3,500
*Wk. so far	43,581	4,120	36,629	15,712
Wk. ago	37,925	3,724	33,973	11,061
1946	9,653	1,689	4,906	10,913
1945	46,188	3,808	33,563	20,728

*Including 2,271 cattle, 1,029 calves, 9,967 hogs and 4,614 sheep direct to packers.

SHIPMENTS

	Cattle	Calves	Hogs	Sheep
Sept. 4	3,401	143	248	358
Sept. 5	1,577	55	1,146	1,064
Sept. 6	205	...	66	...
Sept. 8	4,618	6	420	586
Sept. 9	4,009	89	916	10
Sept. 10	3,657	53	572	85
Sept. 11	3,000	50	500	200
Wk. so far	15,284	198	2,408	881
Wk. ago	13,767	220	2,192	1,534
1946	8,477	673	397	4,268
1945	17,803	947	2,858	1,591

CHICAGO HOG PURCHASES

Supplies of hogs purchased by Chicago packers and shippers week ended Wednesday, September 11, 1947:

	Week ended Sept. 11	Prev. week
Packers' purch.	28,215	26,271
Shippers' purch.	3,630	4,196
Total	31,845	30,467

AUGUST RECEIPTS

	1947	1946
Cattle	84,780	13,726
Calves	8,139	2,719
Hogs	80,207	9,516
Sheep	29,340	23,168

AUGUST SHIPMENTS

	1947	1946
Cattle	31,176	13,183
Hogs	5,740	414
Sheep	3,494	8,151

PACIFIC COAST LIVESTOCK

Receipts for five days ended September 5:

	Cattle	Calves	Hogs	Sheep
Los Angeles	6,600	1,350	1,825	150
San Francisco	1,550	235	1,650	4,600
Portland	3,175	660	715	1,865

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WEEKLY INSPECTED SLAUGHTER

Inspected slaughter of livestock at 32 centers for the week ended September 6, as reported by the USDA, shows an increase for cattle but a decline for calves, hogs and sheep.

	Cattle	Calves	Hogs	Sheep and Lambs
NORTH ATLANTIC				
New York, Newark, Jersey City	7,759	10,677	23,552	32,523
Baltimore, Philadelphia	5,631	1,657	15,601	1,016
NORTH CENTRAL				
Cincinnati, Cleveland, Indianapolis	12,581	3,382	45,236	7,316
Chicago, Elburn	25,842	10,142	57,270	19,351
St. Paul-Wis. Group[1]	23,105	14,257	51,883	17,194
St. Louis Area[2]	16,642	14,057	35,786	14,516
Sioux City	9,786	482	14,028	7,868
Omaha	21,378	1,262	21,988	16,480
Kansas City	22,719	9,543	22,107	15,174
Iowa and So. Minn.[3]	17,787	5,328	87,334	35,817
SOUTHEAST[4]	9,080	5,455	11,075	...
SOUTH CENTRAL WEST[5]	26,360	16,228	29,302	26,327
ROCKY MOUNTAIN[6]	7,113	1,661	8,340	12,445
PACIFIC[7]	16,597	4,071	17,801	30,273
Grand total	222,380	98,202	441,395	236,300
Total week earlier	212,840	101,146	484,066	244,434
Total same week 1946	45,248	42,270	112,119	183,839

[1]Includes St. Paul, So. St. Paul, Newport, Minn., and Madison, Milwaukee, Green Bay, Wis. [2]Includes St. Louis National Stockyards, E. St. Louis, Ill., and St. Louis, Mo. [3]Includes Cedar Rapids, Des Moines, Fort Dodge, Mason City, Marshalltown, Ottumwa, Storm Lake, Waterloo, Iowa, and Albert Lea, Austin, Minn. [4]Includes Birmingham, Dothan, Montgomery, Ala., Tallahassee, Fla., and Albany, Atlanta, Columbus, Moultrie, Thomasville, Tifton, Ga. [5]Includes S. St. Joseph, Mo., Wichita, Kans., Oklahoma City, Okla., Ft. Worth, Texas. [6]Includes Denver, Colo., Ogden and Salt Lake City, Utah. [7]Includes Los Angeles, Vernon, San Francisco, San Jose, Sacramento, Vallejo, Calif.

MEAT SUPPLIES AT NEW YORK

(Reported by the U. S. D. A., Production & Marketing Administration)

WESTERN DRESSED MEATS

	Carcasses
STEERS:	
Week ending Sept. 6, 1947.	11,972
Week previous	11,810
Same week year ago	8,882
COWS:	
Week ending Sept. 6, 1947.	2,043
Week previous	2,354
Same week year ago	2,346
BULLS:	
Week ending Sept. 6, 1947.	381
Week previous	671
Same week year ago	208
VEALS:	
Week ending Sept. 6, 1947.	13,186
Week previous	8,289
Same week year ago	17,012
LAMB:	
Week ending Sept. 6, 1947.	36,990
Previous week	50,099
Same week year ago	54,689
MUTTON:	
Week ending Sept. 6, 1947.	2,341
Week previous	2,708
Same week year ago	5,090
HOG AND PIG:	
Week ending Sept. 6, 1947.	4,401
Week previous	4,772
Same week year ago	11,610
PORK CUTS:	Lbs.
Week ending Sept. 6, 1947.	1,620,492
Week previous	1,396,604
Same week year ago	1,193,771

BEEF CUTS:	
Week ending Sept. 6, 1947.	295,430
Week previous	261,113
Same week year ago	332,354
VEAL AND CALF:	
Week ending Sept. 6, 1947.	2,982
Week previous	3,228
Same week year ago	39,197
LAMB AND MUTTON:	
Week ending Sept. 6, 1947.	2,476
Week previous	4,785
Same week year ago	49,797

LOCAL SLAUGHTERS

CATTLE:	Head:
Week ending Sept. 6, 1947.	7,759
Week previous	7,102
Same week year ago	2,648
CALVES:	
Week ending Sept. 6, 1947.	10,677
Week previous	10,089
Same week year ago	9,505
HOGS:	
Week ending Sept. 6, 1947.	23,552
Week previous	24,964
Same week year ago	19,334
SHEEP:	
Week ending Sept. 6, 1947.	32,523
Week previous	38,579
Same week year ago	33,157

Country dressed product at New York totaled 3,178 veal, 6 hogs and 37 lambs in addition to that shown above. Previous week 3,427 veal, no hogs and 14 lambs. Same week 1946: 2,585 veal, no hogs and 144 lambs.

SOUTHEASTERN RECEIPTS

Receipts of livestock as reported by the Production and Marketing Administration at eight southern packing plants located at Albany, Columbus, Moultrie, Thomasville, and Tifton, Georgia; Dothan, Alabama; Jacksonville and Tallahassee, Florida, are compared with the previous week and with the corresponding week last year.

	Cattle	Calves	Hogs
Week ended September 5	3,107	1,728	5,454
Week ended August 29	3,620	1,439	3,906
Cor. week last year	2,045	1,170	1,094

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WATCH THIS COLUMN FOR WEEKLY SPECIALS

Barliant and Co. list below some of their current machinery and equipment offerings, for sale, available for prompt shipment unless otherwise stated, at prices quoted F.O.B. shipping points, subject to prior sale.

Write for Our Weekly Bulletins.

Meat Packing Equipment Liquidation

A Midwest Packer has discontinued his plans to open a packing plant. We are selling his equipment, most of which is new, in original crates, balance in excellent cond., as listed below:

1—BEEF DROPPER, NEW, Globe #576...$ 400.00
1—HOG VISCERA INSPECTION TABLE, NEW, Globe #240, 2 stainless steel pans 180.00
1—CATTLE HEAD WORKING TABLE, NEW, Globe #98..... 155.00
1—CATTLE HEAD FLUSHER, NEW, Globe #393, 30"x30"x5'6", with hose & nozzle 115.00
1—CATTLE INSPECTION TRUCK, NEW, Globe #122, for 12 heads, rubber tired wheels 110.00
1—AIR HOIST, NEW, Globe #579, 5" dia. 65.00
1—LOIN TRUCK, NEW, Globe #166, rubber tired roller brg. wheels..... 100.00
100—HOG TROLLEYS, NEW, Globe #501-7. Ea. 1.00
100—HOG GAMBRELS, NEW, Globe #264-4. Ea. 1.00
1—PAN STERILIZER, NEW, Globe #192. 55.00
3—LAVATORIES & STERILIZERS, NEW, Globe #594. Each..... 100.00
16—BLEEDING RAIL HANGERS, NEW, Globe #504-6. Lot..... 45.00
12—BEEF BLEEDING ROLLER SHACKLES, NEW, Globe #581-2, bronze bushed. Lot 145.00
1—SINGLE OFFAL PAN RACK, Globe Special #544, on rubber wheels, excel. cond. 105.00
36—CURING BOXES, Globe, 600#, like new, excel. cond. Each..... 25.00

Rendering & Lard Equipment

1—COOKER, Allbright Nell, 4'x10', 20 HP motor and starter, reconditioned... 2250.00
2—COOKERS, American 5x8, 2 New 15 HP motors, guar. excel. cond. Ea..... 2150.00
2—COOKERS, 4x7 Waste saver, 1 with flat belt drive, 1 with silent chain. Ea. 675.00
1—EXPELLER, R.B., with Magnetic separator, 15 HP motor, recond. & guar.... 4250.00
1—PULVERIZER, Williams, with 75 HP motor and starter, reconditioned..... 2000.00
1—CRUSHER, Gruendler, 50 HP motor, recond. 750.00
1—HASHER-WASHER, 20 HP motor, feeder 1100.00
1—ATTRITION MILL, 20 HP motor, reconditioned 500.00
1—MIXER, Haynes, 20 HP motor, reconditioned 500.00
1—CRACKLING BREAKER, Sprout Waldron, 30 HP motor and starter..... 700.00
1—BLOW TANK, NEW, Boss 1 ton..... 2800.00
1—MAGNETIC SEPARATOR, Dings, 5 HP motor, reconditioned, New generator 500.00
1—LARD ROLL, Rujak 3'6", 5 HP motor, excel. condition, complete..... 550.00
4 Cars—LARD BARRELS, mixed. Each.. 2.40
4 Cars—DOUBLE HEADED BARRELS, White Oak, used once, recoopered, excel. cond. Ea..... 4.00

Miscellaneous Equipment

300—ALUMINUM ALLOY SCOOPS, Sanitary Zephyr-weight, non-corrosive, closed back construction; Round End, Eastern, & Western patterns. Sizes and Prices on Request.
1—SILENT CUTTER, Buffalo 43B, excel. cond. 650.00
1—Combination Unit, Buffalo Cutter and Enterprise Grinder, 5 HP motor, line shaft 465.00
1—STUFFER, Boss 200#, excel. cond.... 335.00
1—MIXER, Boss 400#, direct driven, 7½ HP motor, reconditioned & guar..... 700.00
1—SLICER, Allbright-Nell, 2 HP motor, with stand & bacon table, recond. & guar. 600.00
1—GRINDER, Enterprise, #4066, direct-motor driven, 15 HP, BRAND NEW, guaranteed 1545.00

Telephone, Wire or Write if interested in any of the items above, or in any other equipment. Your offerings of surplus and idle equipment are solicited.

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Meat Packers—Attention

Eastern distributor is looking for pork packer interested in shipping mixed car pork products.

W-237
THE NATIONAL PROVISIONER
407 S. Dearborn St., Chicago 5, Ill.

Chile: Beef Casings

Bladders and dried gut strings offered. Sales agent in the United States required.

Leopoldo Levy
Clasificador 172
Santiago de Chile

CANNED MEAT EXPERT seeks financial backer to manufacture "IMPORTED STYLE" canned ham and other canned meat specialties. Will stand thorough character investigation. W-218, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

Sales organization contacting packers, lockers, wholesalers in Ohio interested in additional equipment items for this trade. References exchanged. Reply to F. W. Owen, P. O. Box 218, Lorain, Ohio.

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CHEsapeake 5300

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Meat Packers—Attention

FOR SALE: 1-Hottmann #4 Mixer, 600# capacity, requires 40 HP, jacketed trough; 1-Enterprise #166 Meat Grinder, belt driven. 3-Mechanical Dryers, 5'x12'; 1-Cast Iron 2000 gallon jacketed agitated Kettle; 12-Stainless jacketed Kettles, 30, 40, 60, 80 gallons; 30-Aluminum jacketed Kettles, 20, 40, 60, 80, 100 gallon; 2-Allbright-Nell 4x9' Lard Roller; 1-Brecht 1000# Meat Mixer. Send us your inquiries.
WHAT HAVE YOU FOR SALE?
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F8-505, THE NATIONAL PROVISIONER,
407 S. Dearborn St., Chicago 5, Ill.

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FOR SALE: Boss 32-silent cutter with 10 H.P., 3-phase motor. Special motor stand makes motor pulley level with pulley of cutter, extra set of knives. Machine in excellent condition. Larger installation reason for sale. $385.00 F.O.B. White & Company, Box 245, Moorhead, Miss.

FOR SALE: 200 lb. Boss stuffer in A-1 condition. $350.00 F.O.B. Hiawatha, Kansas. Hiawatha Meat Co., Hiawatha, Kansas.

FOR SALE: Dohm & Nelke Rine Master, used 8 months. A-1 condition. $1395.00. Roegelein Provision Company, P.O. Box 4127, Sta. A., San Antonio, Texas.

FOR SALE: Meat chopping blocks. Immediate delivery. Prices on application. S. A. Keers, 559 Broadway Ave., Leaside, Ontario, Canada.

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CLASSIFIED ADVERTISING • *For Additional Ads See Opposite Page 286*

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Excellent opportunity to grow with progressive, established firm that specializes in the manufacture of quality seasonings, spices, binders and curing materials. We are willing to pay this man what he is worth. If you are used to substantial income, write giving full particulars, experience, etc. All replies will be held strictly confidential. W-234, THE NATIONAL PROVISIONER 740 Lexington Ave., New York 22, N. Y.

SALES MANAGER: You're between 28 and 35 and up to now have been building a solid background and gathering valuable experience in meats or food products for this extra special job. We're a long established Wisconsin quality house, specializing in fine meat products. Our boss wants an aggressive right hand man who can co-ordinate sales promotion and advertising and do a sound selling job. Attractive salary and bonus arrangement. Opportunity with real future. If this is the executive niche you've been hankering for, tell us in a one page letter what you've done and why you and we should get together. Replies strictly confidential. Write to W-232, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

CATTLE SIDER (Floorman) and cattle splitter wanted. Will pay top wages for A-1 workmen. Write Kuhner Packing Company, Muncie, Indiana.

HELP WANTED

Salesman

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STANDARD CASING CO., INC.
121 Spring St., New York 12, N. Y.

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National manufacturer of curing and seasoning compounds for the meat packing industry has opening as sales representative for experienced sausage maker, to headquarter in Kansas City, and cover Missouri-Nebraska-Kansas territory. Compensation: salary and commission. Write to us giving complete information about yourself. Your letter will be treated confidentially. Fearn Laboratories, Inc., 9353 W. Belmont Ave., Franklin Park.

Experienced Sausage Maker

Up-to-date, well established, independent, southwest packer has permanent position for sausage maker foreman. Must have a good background and a thorough knowledge of all phases of sausage production. W-228, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

WORKING FOREMAN WANTED: For sausage manufacture in the city of Detroit, Michigan. Must be able to take complete charge of entire operation, and know how to produce quality product. Only top notch man considered, no others need apply. Must stand thorough investigation, all correspondence will be treated confidentially. W-236, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

MAINTENANCE ENGINEER: Must be thoroughly experienced in packing house refrigeration and maintenance of packing house machinery. Kindly give full details in your reply, stating age, experience and references. W-229, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

BOOKKEEPER-ACCOUNTANT wanted. Must be experienced and able to handle complete set. Opportunities unlimited, with very prominent beef packer. Must be willing to leave town. W-221, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago 5, Ill.

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THE NATIONAL PROVISIONER

The Magazine of the Meat Packing and Allied Industries

Volume 117 SEPTEMBER 13, 1947 Number 11

THE NATIONAL PROVISIONER, INC.
407 So. Dearborn St.
Chicago 5, Ill.

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